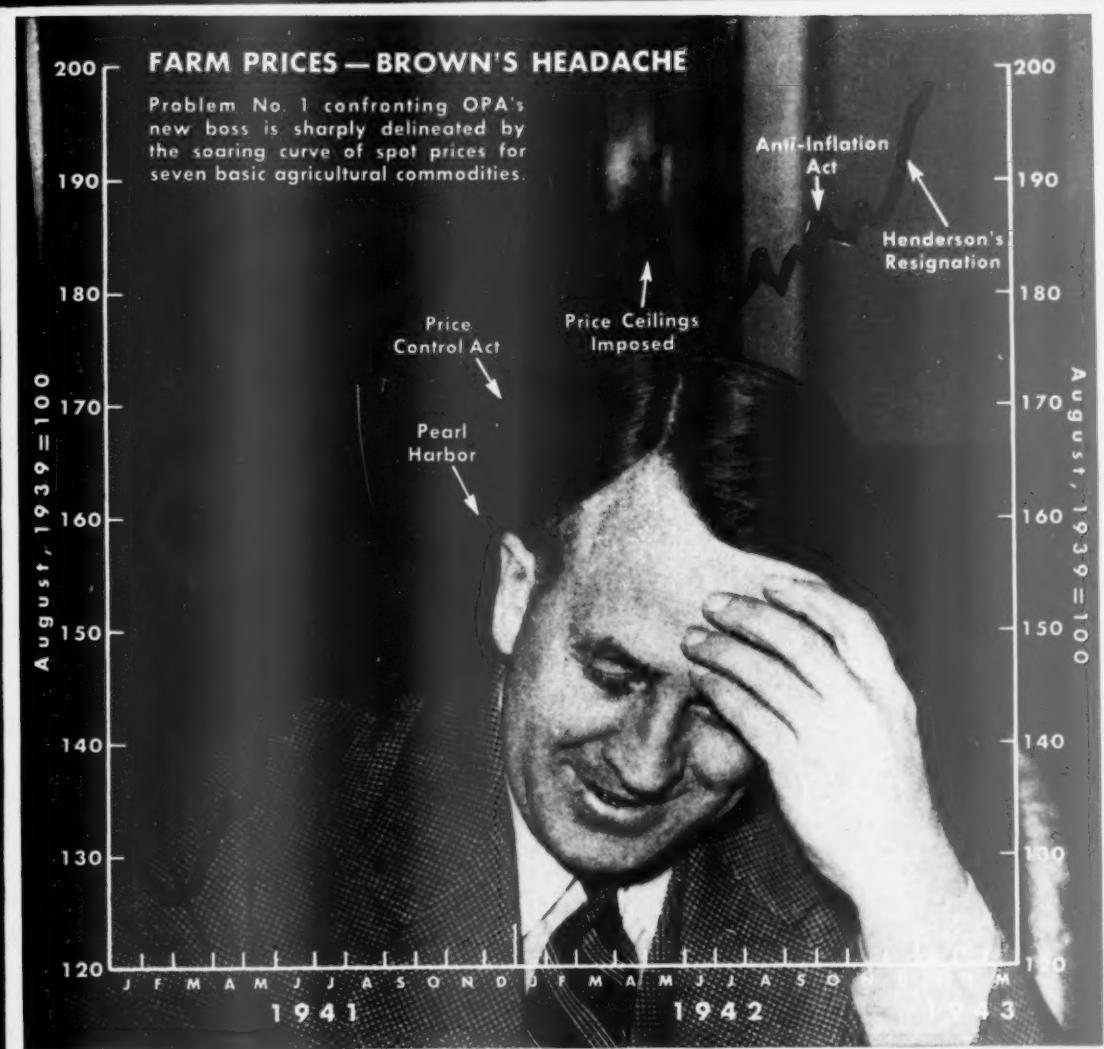


BUSINESS WEEK

WEEK
AGO

YEAR
AGO

START
OF WAR
1939



BUSINESS
WEEK
EX

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"We have not yet begun to fight"

Thank God for good news. But — don't let it make you sit back with any calm assurance the war is won.

Our fighting men have done a magnificent job but they would be the first to echo the old Commodore's battlecry, "We have not yet begun to fight". The tough going, the time that will really take courage, is ahead . . . courage and the stuff that will give our fighting men courage—a flood of war supplies from a nation producing at top speed.

The only privilege our soldiers and sailors ask is the chance to get at the Japs and Germans. The only privilege any American at home should ask is the chance to get at a job that will give those soldiers and sailors the weapons on which their lives (*and yours*) depend.

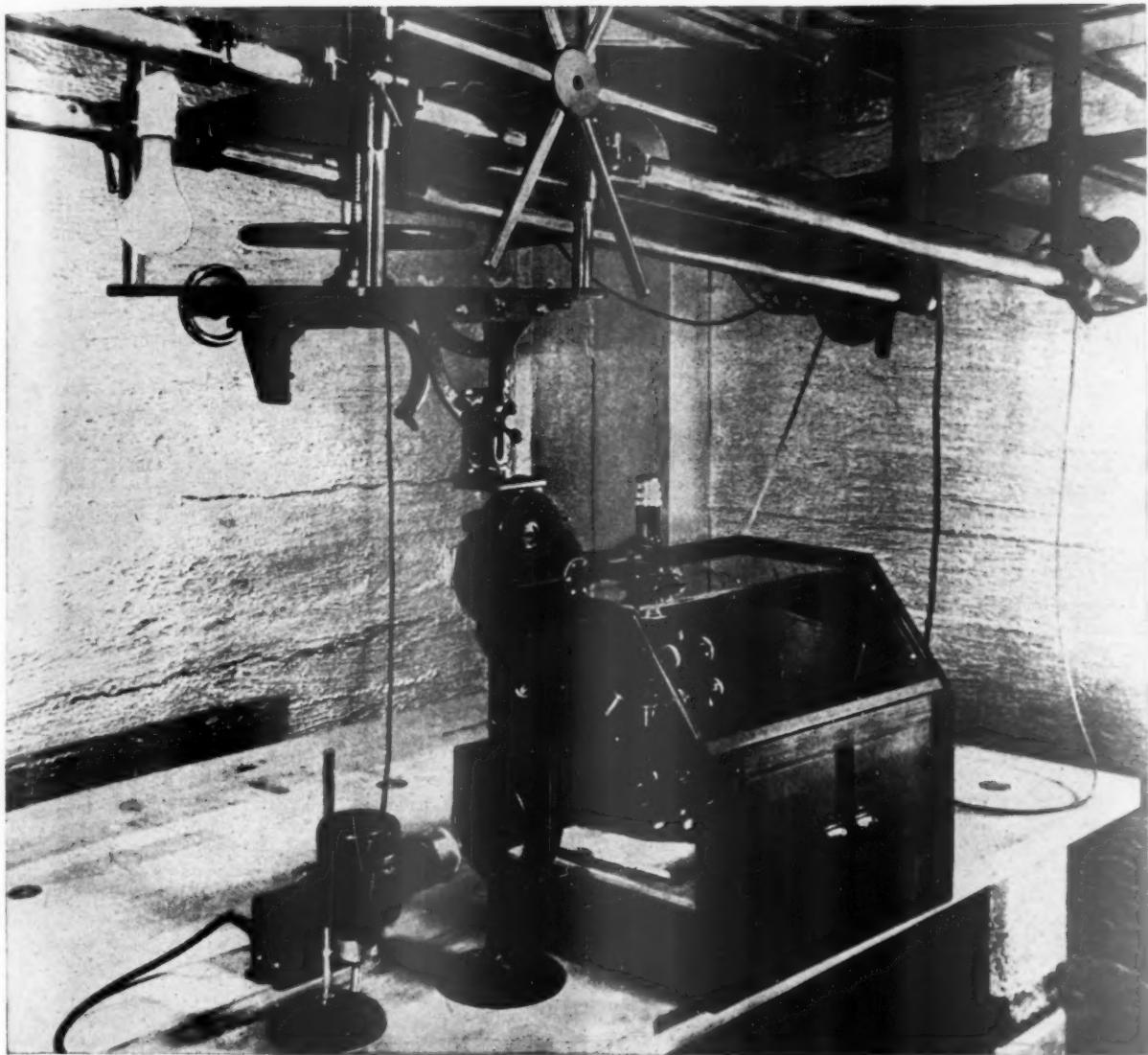
Any workman, manager or politician who thinks the war is safe and so slows down to make his job last longer is a traitor to his country and a murderer of American boys. The only workmen, business men and politicians who dare call themselves Americans are the ones who work as enthusiastically and well as our armed men fight.

Too many here at home have "not yet begun to fight".... Their time is running out.



WARNER & SWASEY
Turret Lathes
Cleveland

— YOU CAN TURN IT BETTER, FASTER, FOR LESS . . . WITH A WARNER & SWASEY —



Rubber soaks up the jiggles— now doctors read the truth

A typical example of B. F. Goodrich development in rubber

MEDICAL men save lives by knowing how human tissues grow, change, develop. But doctors can't live with eyes glued to microscopes. Photographing growing tissues automatically, in successive stages, through powerful magnifying lenses, would save time, and also provide a better and permanent record.

But the slightest vibration in the object being photographed ruins results, makes the prints look like graphs of jiggles instead of photographs of

human tissues. A St. Louis scientist had an idea—design a table whose legs would be made of alternate layers of concrete for solidity and sponge rubber to absorb vibration.

But the rubber would have to be strong enough to support the heavy concrete without flattening out, soft enough to absorb the vibration passed through the ground, yet not soft enough to set up any swaying action.

B. F. Goodrich engineers were asked to find the right kind of rubber, and the table was built. There were no

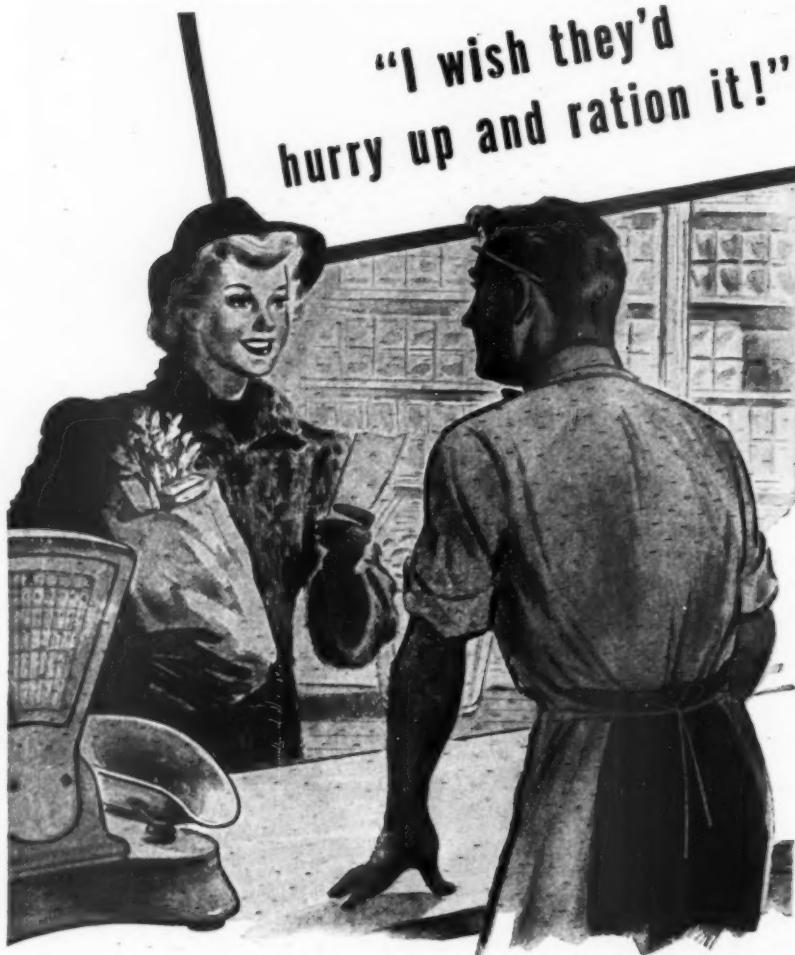
vibrations even when heavy traffic thundered by the hospital . . . and another improvement in medical science had been made.

Development work like this continues, even during today's drastic rubber restrictions, and many improvements in rubber products will be ready by the time war is ended. *The B. F. Goodrich Co., Industrial Products Div., Akron, Ohio.*



B. F. Goodrich

FIRST IN RUBBER



Smart housewife, Mrs. Jones. Not just patriotic; smart. Far from being afraid of rationing, she welcomes it. All too vividly does she remember how it was with gasoline and coffee. She knows that only by a fair-and-square, democratic dividing-up of the national supply will her family get its share.

When a good American understands about rationing—that it is not dictatorial but democratic; that it is a war weapon of front-rank importance—why, he'd rather go hungry than hoard. Luckily, he won't have to do either. There's enough for all—if everybody plays the game.

The only thing that we at **SKF** are unwilling to ration is our energy. *That* we want turned, full-strength, into making the bearings that speed our war machines to Victory.

SKF
BALL AND ROLLER
BEARINGS

SKF INDUSTRIES, INC., PHILA., PA.

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WASHINGTON BULLETIN

WHAT THE WASHINGTON NEWS MEANS TO MANAGEMENT

Out-On-A-Limb

Here's the judgment of Business Week's Washington Bureau on issues which, in the nature of things, are uncertain. If you have to gamble on these issues, the odds on the following are better than even:

No social security legislation will be enacted before the 1944 elections.

Openly or not, the Little Steel wage formula will be a dead letter by July.

The armed forces will never reach 10,000,000 in this war.

The rapid rise in over-all military production will end inside of a couple of months. Aircraft production will, however, continue its terrific increase after a temporary leveling off in midsummer.

The farm bloc will succeed in tossing parity aside as an obstacle to the rise in prices.

Cost of living will rise another 10% by the end of the year.

There will be no National Service Act. Country's temper has swung against it, and people who really want to do something about manpower now believe they can do as much without, as with, a law.

There will be no drastic reorganization of the war agencies, such as proposed in the Tolan-Pepper-Kilgore bill. The war now is too far along.

The wage-hour law will not be amended to eliminate time-and-a-half pay for overtime over 40 hours.

Arnold's Final Victory

Thurman Arnold is retiring from his stormy career as trust buster with the scalp of the American Medical Assn. on his belt. Although the Supreme Court did not pass on the question of whether a physician's practice of his profession constitutes "trade" within the terms of the antitrust law, Associate Justice Robert H. Jackson's opinion held that cooperative groups furnishing medical care to their members certainly do. Ergo, that A.M.A., by using coercion to prevent its member physicians from participation in Group Health, Inc., was guilty of restraint of trade.

The New Trust Buster

"Promotion" of Trust Buster Arnold to a circuit court judgeship marks the end of the longest sustained period of one-man antitrust enforcement in a generation. Arnold raked big business from end to end. Only the war put a damper

on his relentless pursuit of what he considered monopoly, and only the labor unions found sanctuary in the courts.

Arnold's job as head of the Justice Department's Antitrust Division may go either to Hugh Cox or to Tom C. Clark. Probably to Clark, as Cox may be offered the job as head of a new War Division which Solicitor General Charles Fahy is organizing. This will embrace the present war frauds unit (of which Clark now has charge), alien enemy control, alien property litigation, and a special war policies group which serves in an advisory capacity to Attorney General Francis Biddle.

Both Cox and Clark served under Arnold in the Antitrust Division. Cox cut his eye teeth in the investigations conducted by the Antitrust Division on behalf of the Temporary National Economic Committee several years ago.

Two More Chains Sued

Having indicted the Great Atlantic & Pacific Tea Co. on charges of monopolizing business and restraining trade (BW-Dec. 5 '42, p69), the Antitrust Division this week rounded out its campaign against chain grocery systems by obtaining indictments at Kansas City, Kan. against Safeway (No. 2 chain) and the Kroger Grocery & Baking Co. (No. 3). Charges are the same as against A. & P. Main objective: to break up integrated manufacturer-retailer operations.

Both Kroger and Safeway have indicated that they will defend themselves principally on the ground of efficiency, but it is this very efficiency—particularly in the case of Safeway, which has probably carried integration of functions further than any other mass distributor—that now may make trouble.

Consider for example the Safeway policy of handling all deliveries to its own stores (BW-Jan. 31 '42, p53). Safeway argued that it was inefficient for individual manufacturers to deliver to all individual outlets, insisted that all merchandise be delivered to company warehouses and delivered in Safeway trucks. Because it was undertaking this delivery function, Safeway asked for and got a sizable discount, reputedly in the neighborhood of 20%. Manufacturers who refused to play ball found themselves summarily out of the Safeway Stores; biggest holdouts were Coca-Cola, Baker's chocolate, Shasta water.

• **Independents Howl**—The Safeway self-delivery policy hasn't worked in every case—notably perishable products—but the chain is getting the discount

now on about 90% of all its merchandise, and that's enough to make independents hopping mad.

Stormy Petrillo

As far as labor unions were concerned, Arnold's trust-busting style was further crimped last fall (BW-Nov. 28 '42, p32) when the Chicago federal court dismissed his case against James Caesar Petrillo and the musicians' union as a labor dispute outside the anti-trust statute.

Now as a going-away gift to the Dept. of Justice he leaves the suit reopened and scheduled for trial Feb. 12. New complaint reiterates "conspiracy in restraint of trade," adds charge of conspiracy, through the recording ban (page 28), to force 550 non-network affiliated radio stations off the air.

• **Movies Next**—Provided this antitrust action doesn't deter him and he polishes off his records-radio battle—win, lose, or draw—Petrillo will crack down on Hollywood this spring. And he'll have more at stake in that battle than in the record fight because sound movies affect more of his 138,000 union musicians.

Hazy Days on Taxes

Talk about the next tax bill shouldn't be taken too seriously at this stage of the game. So far, no government agency has put together a comprehensive program for additional taxation. Most of the suggestions are merely a kind of thinking out loud. It's open season for new schemes, trial balloons, bright ideas.

Even suggestions that carry the Treasury label have no official standing. The Treasury, like any other organization, does its collective thinking by getting an idea and kicking it around until the staff makes up its mind. When word trickles out that the Treasury is "considering" a particular idea, it doesn't mean that Secretary Henry Morgenthau is ready to go to bat for it. Just on the law of averages, most of the Treasury's ideas will be scrapped.

• **Individuals Will Pay**—One thing about the next tax bill is certain, however. Most of its weight will fall on individual incomes. Congress may jack up the rates on corporations a trifle, but the top isn't far off. Big question is not where to raise the extra revenue but how.

Why Kanzler Quit

Resignation of Ernest Kanzler as WPB director-general of operations has been expected ever since Ferdinand Eberstadt



Wanted - More Synergism!

"What is Synergism?" you well may ask. To put it succinctly, you might say that synergism is the force that can make $2 + 2 = 5$.

Synergism is not a new word. It has its roots in the classic Greek ($\Sigma\mu\nu$ —together; $\epsilon\rho\gamma\sigma\nu$ —work) and has long had its connotations for the chemist, the doctor and the theologian. Basically, it always has meant forces working together to produce a whole greater than the sum of the parts.

Now, "Synergism" emerges, in its larger sense, with a meaning for industry, bred of war accomplishment.

For the miracles of war production are in no small part due to the meeting of minds, working together as a creative stimulus—minds that "click," as we call it on the street—so that the net result is always greater than the sum total of the individual ideas. From synergistic thinking, evolve the great mechanisms, the new synthetics, the magnificent product creations which comprise materiel for Victory.

Synergism may apply to individuals working together, to groups, to companies—across a table, in the labora-

tory, in the field. It is the newer concept for industrial mentality. Now, as never before, it is evident that industrial progress revolves about the stimulus created by minds working together to "click" creatively. Synergism is a much needed component for post-war development—not as an abstract philosophy, but as a practical working force.

Here at Atlas, we are "Synergism-minded." In our own fields of chemical endeavor, we have acquired a degree of expertise which can be applied synergistically to products now to create results far beyond present design expectations. Add synergism to cooperation and miracles become commonplace.

We would like to talk with you.

ATLAS POWDER COMPANY WILMINGTON, DELAWARE

Offices in Principal Cities

Industrial Explosives
Activated Carbons

Industrial Finishes •
Industrial Chemicals

Coated Fabrics • Acids
Ordnance Materiel



WASHINGTON BULLETIN (Continued)

assumed the job that Kanzler thought he had come to Washington to do. Kanzler had his own ideas about a material distribution system along the lines of the General Motors Plan—ideas that were superseded by Eberstadt's Controlled Materials Plan.

Curtis E. Calder, a "public" member of the New York Stock Exchange board of governors and president of American & Foreign Power Co., succeeds Kanzler.

Renegotiation Fades

Renegotiation of contracts is fading from the picture as more precise knowledge of costs permits forward pricing. Contractors who have made refunds on past business can get advance clearance for future business, relieving them from renegotiation if they agree to bring their prices down into line with the refunds. The War Dept. also is introducing short-term pricing on long-term contracts, which relieves contractors from renegotiation. This way prices are subject to adjustment periodically—at intervals of three to six months, for example.

If contractors succeed in progressively driving down their costs, they are allowed a somewhat wider margin of profits, which are not subject to recapture when the contract is completed. The Navy and Maritime Commission will watch the Army's periodic adjustment method for possible adoption.

Congressional committees are poking into the results of contract renegotiation, but it is extremely unlikely either that the renegotiation law will be overhauled again or that it will be scrapped in favor of a statutory limit on profits.

Needles for Brown

From Leon Henderson and those close to him on the price control front look for a burst of publicity, designed to needle the new price administrator, former Sen. Prentiss Brown, into continuing previously determined OPA policies. The major jab will be fanfare showing that large corporations, and even agricultural producers, piled up big profits during the first year of war.

Henderson wants OPA to use these profits as a cushion which can absorb rising costs without raising ceilings. Pressure tactics are to soften up Brown so he will keep J. K. Galbraith and other Henderson henchmen who are staying at OPA for a trial period.

Help on the Price Front

Don't read far-reaching significance into the announcement that Judge Marvin Jones, U. S. Court of Claims, has taken a "temporary" assignment with

Economic Stabilizer James F. Byrnes. Some would like to think he is being groomed to become (1) food administrator, (2) Secretary of Agriculture, or (3) head of an over-all civilian supply agency.

Actual facts are that Jones did not resign his lifetime post on the Court of Claims; he took the job on the express promise from Byrnes that he would not have to assume any administrative responsibilities. Moreover, because he is a former chairman of the House Agriculture Committee and is acceptable to the major farm groups, Jones will try to help Byrnes in his rear-guard fight against farm price inflation (BW-Jan. 16'43, p7).

• **Winning Time**—Temporary success achieved by Byrnes in splitting the farm bloc by putting a price ceiling on corn (BW-Jan. 16'43, p7) is demonstrated by the reaction of the livestock producers.

President Frank S. Boice, of the American National Livestock Assn. told his annual meeting that the parity revision demands of the "big four" farm organizations are "very unwise and untimely" because they might end in a "vicious spiral" of inflation.

Friend of Small Business

Appointment of Col. Robert Johnson, head of the New York Ordnance District, to replace Lou E. Holland as chairman of the Smaller War Plants Corp. looks good for small business—to the extent that anything can be done for small business. Johnson was Don Nelson's first choice for the job at the time that SWPC was set up as a non-military agency, the only nonmilitary agency with authority to place military contracts.

Johnson's appointment can't be con-

Saposs Leads Labor Drive in WPB

A labor campaign to skin an old cat by new tactics lies behind the transfer of David J. Saposs from Nelson Rockefeller's Office of Inter-American Affairs to a newly created post as economic adviser to WPB's Labor Production Division. Months ago, top labor leaders demanded of Donald Nelson the appointment of two union men to WPB vice-chairmanships (BW-Sep. 12'42, p110). They publicized his answer as a promise that their demands would be met. But, when nothing happened, the unions resigned themselves to the fact that they are not going to push into WPB from the top. Nevertheless, their hope of extending their influence and power in WPB has never for a moment been abandoned.

The unions virtually run WPB's Labor Production Division, but up to now this division has performed only limited functions. New strategy calls for building up its strength and pushing it into all important WPB work. Goal is wider representation in WPB's industry divisions, a voice in Ferdinand Eberstadt's "little manpower commission," and participation in making decisions on such matters as industrial concentration, standardization, and the letting of contracts.

Saposs was brought into WPB's Labor Production Division by its labor policy committee, composed of A.F.L. and C.I.O. officials. They wanted him hired in order to do some



carpentry on their Trojan horse.

Saposs, former economist for the National Labor Relations Board, left that agency when Congress, as the result of charges by Rep. Martin Dies, refused to appropriate money to keep the Saposs section operating. Dies is reported to have subsequently written Saposs that the charges of Communist sympathies were made in error.

But, for weeks after he left NLRB, Saposs was too much of a symbol for any government agency to offer him a job. Rockefeller, however, needed his services and was prepared to risk the political dangers of taking him on. Now, his storm-centered role almost forgotten, Saposs is moving back into the arena.

WASHINGTON BULLETIN (Continued)



Many operations in the construction field call for dependable eye protection. Willson provides the workers in this industry with many different types of goggles, each designed to give a snug comfortable fit as well as provide dependable protection from specific hazards. On eye protective and respiratory problems in any industry consult your local Willson Safety Service Representative or write direct.

GOOGLES • RESPIRATORS • GAS MASKS • HELMETS

WILLSON
DOUBLE
PRODUCTS INCORPORATED
READING, PA., U.S.A.

strued as a take-over of SWPC by the Army. He's not a typical procurement officer, as was revealed by his testimony before the Senate's small business committee last Oct. 14. As New York Ordnance District chief, Johnson said he had created a small plants section to spread contracts around but that 70% to 85% of the contracts reaching the N. Y. district from Washington were earmarked for particular concerns.

Johnson told the committee that, as of the date of his testimony, 32% of the number of all outstanding contracts in the New York office were with firms having 50 employees or less.

Cash for Informers

Watch for a flood of "informer" suits against government contractors, especially those whose payments have been questioned in court. The Supreme Court's decisions this week against the Pittsburgh electrical contractors (BW-Mar. 29 '41, p20) and New Orleans general contractors for bidding frauds on PWA-aided building projects leave the door wide open.

Nub of the Pittsburgh case was whether the "informer," Morris L. Marcus, was entitled to buttress his suit with evidence of collusive bidding adduced by the grand jury in unrelated criminal proceedings. On the top side of the 6-to-1 decision, Justice Hugo L. Black ruled that he was, thus reinstating the \$315,000 jury verdict (for civil penalties and double damages) that had been upset by the Third Circuit Court of Appeals (BW-Apr. 4 '42, p32).

Marcus must split 50-50 with the U. S. under the so-called "relator" act, passed in 1863 to cope with a wave of Civil War contract frauds, upon which he based his claim. Ironically, Assistant Attorney General Thurman Arnold, whose trust busters initiated the criminal case, sought only ten months ago to have the double-damage suit thrown out of Circuit Court (BW-Mar. 7 '42, p40).

- Still in Force—The significant note of Black's opinion was that the hoary law, in disuse for years, remains in full force. He observed that Marcus, while he may have "contributed nothing to the discovery of this crime," nevertheless had "contributed much to accomplishing one of the purposes for which the act was passed."

Lower Phone Rates Row

With an eye to possible reductions in local phone rates, state utility commissions have succeeded in persuading the Federal Communications Commission to divert the greater part of A.T.&T.'s "excess" earnings from its long-distance business into increased toll compensa-

tion to local companies. The state commissions claimed that a slash in long-distance rates, announced this week, would only benefit luxury users.

Army and Navy also opposed long-distance rate cuts on the ground that they would stimulate traffic on already overloaded circuits, interfere with the war effort.

Allied Trade Dispute

The practical problems that are bound to make the job of planning the postwar world a tough one were foreshadowed this week. It is plain from cocktail gossip, though nothing has been admitted officially, that some Americans are complaining that British interests rushed into world supply zones recently allocated to the United States and bought up available stocks of raw materials that Americans had expected to get. Another group insists that London has not supplied all of its available information about certain world markets because it would weaken Britain's competitive position after the war.

Aware that much of the truth of claims stems from the fact that London is often more alert in foreign trade operations because of the far greater importance of exports to its national economy, Washington has managed so far to keep the lid on the controversy.

Meanwhile, capital officials are quietly collecting a mass of market information, especially in Latin America (BW-Jan. 9 '43, p19), which will be an invaluable guide for postwar business and will give an edge to American business men if they care to go after this trade.

Capital Gains (and Losses)

Labor-management committees are organized in scarcely 2,000 war plants, and WPB's Production Drive is beginning to bog down. Expansion has almost stopped. Difficulty is labor insistence on representation on the field staff that organizes the committees. Drive officials are dubious, fear this will scare off industrialists.

You can't get War Ration Book No. 2 without having War Ration Book No. 1 (deadline for which was Jan. 15), but OPA will take care of babies born since the mid-January deadline. Parents can register their new offspring in a special registration to be conducted two weeks after the rest of the population gets its new point-rationing tickets.

William Jeffers won a side-issue victory in his rubber battle (page 17) on Wednesday when the Board of Economic Warfare gave him control over all import programs.

—Business Week's
Washington Bureau

FIGURES OF THE WEEK

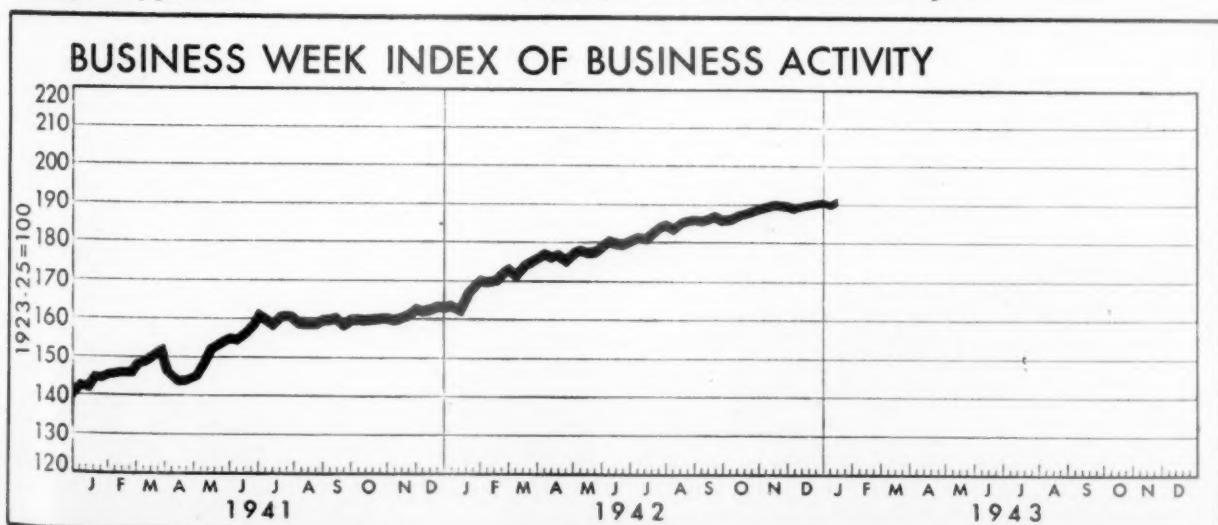
	Latest Week	Preceding Week	Month Ago	6 Months Ago	Year Ago
THE INDEX (see chart below)	*192.0	†190.9	191.0	183.6	167.5
PRODUCTION					
Steel Ingot Operations (% of capacity)	99.8	99.3	98.1	98.0	95.0
Production of Automobiles and Trucks	18,380	17,155	15,660	17,870	75,625
Engineering Const. Awards (Eng. News-Rec. 4-week daily av. in thousands)	\$11,359	\$10,305	\$12,927	\$39,239	\$17,699
Electric Power Output (million kilowatt-hours)	3,952	3,953	3,976	3,565	3,450
Crude Oil (daily average, 1,000 bbls)	3,850	3,821	3,892	3,713	4,046
Bituminous Coal (daily average, 1,000 tons)	1,833	1,860	1,944	1,793	1,860
TRADE					
Miscellaneous and L.C.L. Carloadings (daily average, 1,000 cars)	71	73	74	79	76
All Other Carloadings (daily average, 1,000 cars)	48	48	49	64	47
Money in Circulation (Wednesday series, millions)	\$15,322	\$15,393	\$15,092	\$12,502	\$11,062
Department Store Sales (change from same week of preceding year)	+6%	+5%	+17%	+10%	+32%
Business Failures (Dun & Bradstreet, number)	96	95	115	167	260
PRICES (Average for the week)					
Spot Commodity Index (Moody's, Dec. 31, 1931 = 100)	243.9	243.1	238.4	231.4	223.5
Industrial Raw Materials (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	157.1	156.9	156.2	154.8	152.5
Domestic Farm Products (U. S. Bureau of Labor Statistics, Aug., 1939 = 100)	199.0	198.4	193.8	182.0	176.9
Finished Steel Composite (Steel, ton)	\$56.73	\$56.73	\$56.73	\$56.73	\$56.73
Scrap Steel Composite (Iron Age, ton)	\$19.17	\$19.17	\$19.17	\$19.17	\$19.17
Copper (electrolytic, Connecticut Valley, lb.)	12,000¢	12,000¢	12,000¢	12,000¢	12,000¢
Wheat (No. 2, hard winter, Kansas City, bu.)	\$1.36	\$1.37	\$1.31	\$1.07	\$1.26
Sugar (raw, delivered New York, lb.)	3.74¢	3.74¢	3.74¢	3.74¢	3.74¢
Cotton (middling, ten designated markets, lb.)	20.43¢	20.41¢	19.74¢	19.34¢	18.91¢
Wool Tops (New York, lb.)	\$1.201	\$1.191	\$1.220	\$1.250	\$1.279
Rubber (ribbed smoked sheets, New York, lb.)	22.50¢	22.50¢	22.50¢	22.50¢	22.50¢
FINANCE					
90 Stocks, Price Index (Standard & Poor's Corp.)	79.9	78.9	76.9	69.5	71.0
Medium Grade Corporate Bond Yield (30 Baa issues, Moody's)	4.15%	†4.19%	4.27%	4.30%	4.28%
High Grade Corporate Bond Yield (30 Aaa issues, Moody's)	2.79%	2.80%	2.82%	2.83%	2.83%
U. S. Bond Yield (average of all taxable issues due or callable after twelve years)	2.32%	2.32%	2.36%	2.34%	2.38%
U. S. Treasury 3-to-5-year Note Yield (taxable)	1.30%	1.33%	1.36%	1.20%	0.97%
Call Loans Renewal Rate, N. Y. Stock Exchange (daily average)	1.00%	1.00%	1.00%	1.00%	1.00%
Prime Commercial Paper, 4-to-6-months, N. Y. City (prevailing rate)	‡-1%	‡-1%	‡-1%	‡-1%	‡-1%
BANKING (Millions of dollars)					
Demand Deposits Adjusted, reporting member banks	28,964	28,367	29,120	25,822	24,169
Total Loans and Investments, reporting member banks	41,239	41,344	39,829	33,338	30,233
Commercial and Agricultural Loans, reporting member banks	5,975	6,030	6,105	6,481	6,728
Securities Loans, reporting member banks	964	1,116	1,137	1,023	925
U. S. Gov't and Gov't Guaranteed Obligations Held, reporting member banks	28,142	28,025	26,317	19,110	15,259
Other Securities Held, reporting member banks	3,286	3,284	3,283	3,382	3,666
Excess Reserves, all member banks (Wednesday series)	2,150	2,330	2,637	2,065	3,561
Total Federal Reserve Credit Outstanding (Wednesday series)	6,274	6,378	6,055	3,227	2,390

* Preliminary, week ended January 16th.

† Revised.

‡ Ceiling fixed by government.

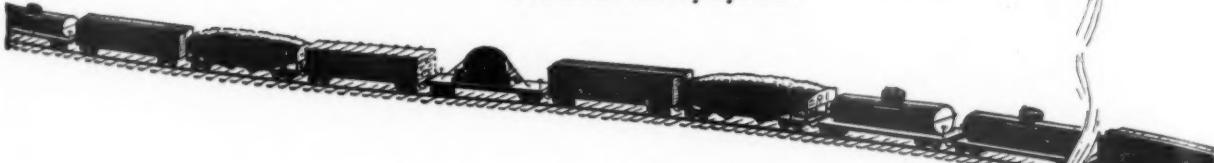
§ Date for "Latest Week" on each series on request.



The train with no caboose

YOU HEAR its deep, friendly voice echoing through the mountains and the valleys of the Southland. You hear its powerful engine pounding through many a bustling city. You hear its eager clickety-clack as it weaves across fertile farmlands and greening pastures.

It's a freight train that never ends... with no last car... no caboose. It's the combined war-time freight haul of the Southern Railway System.



Day and night, this train hauls ore from the mines, oil from the wells, food from the fields and lumber from the forests. Day and night, it rushes bread and beef and bullets to America's fighting men. Day and night, it feeds American industry and sustains a nation grimly at work.

And when the war is over, this train with no caboose will still be humming over the rails of the Southern, proudly bearing the hard-won fruits of Victory.

For then another *new* South will have been born... a richer, greater South... ready with new plants,

new processes,
new products for the free
people of the better world that surely
lies ahead.

Ernest E. Morris
President

SOUTHERN
RAILWAY SYSTEM
The Southern Serves the South



THE OUTLOOK

Big War Jobs to the Fore

On the industrial front, it's breaking arms bottlenecks, pushing rubber, building ships. On the food line, it's solving crop, price, and labor problems. And the labor problems grow.

News of important Allied gains (page 32) again shared the headlines this week with domestic events that were making the nation and its executives more and more aware of the gigantic war tasks yet to be achieved.

Breaking the new production bottleneck (page 15) is one job. Meeting a summer rubber crisis (page 17) is another. And official announcement this week of a 19,000,000-ton cargo ship goal for 1943 confirmed overseas transport as an even more important third.

Key Factor—Shipping

For the shipping shortage is the one big limitation on our offensive power, the chief determinant of production strategy (BW—Dec. 12 '42, p13). Efforts to combat U-boat depredations and to expand ship supply are cutting deep into our war output; cargo ships alone will take 10% of 1943 steel.

January sinkings are running higher than December's, and reports are that Hitler is building subs twice as fast as we destroy them, enabling the Nazis to throw more than 500 U-boats against us in their developing undersea offensive. Box scores in the next few months on sinkings versus buildings—both for our ships and for German subs—will be important in shaping war prospects and decisions on manpower as well as production.

For, increasing attention must soon be given to whether we can ship our proposed armed forces. Two weeks ago President Roosevelt revealed the 1942 year-end total of men under arms as an astounding 7,000,000, and continuance of current draft quotas would lift that to 10,000,000 by mid-year. Before then, the pool of youngsters will be drained, and fathers may be due for call this summer. And between now and then, seasonal farm needs will reach their peak. Partly, that timing is the factor behind this week's War Manpower Commission order liberalizing the basis for deferment of agricultural labor.

New Farm Moves

But, actually, this is one of several moves to put the farm house in order. Allocations of materials to farm equipment makers have run well above the low quotas previously set, and the WPB may permit a bunching of 1943 output

into the first six months. On fertilizers, Secretary Wickard this week set up a priority system for most crucial crops. Acreage goals for potatoes, dried beans, and truck crops were upped. And agriculture's experts are worrying over measures to meet possible bottlenecks in autumn transport of livestock and, possibly, in processing. These measures reflect more serious concern over farm prospects than officials publicly admit.

Crop Questions

Weather, of course, will be crucial, even though the latest crop report indicates that conditions so far are good. The Agriculture Department goes on to point out if only "normal" weather prevails this year, instead of 1942's excep-

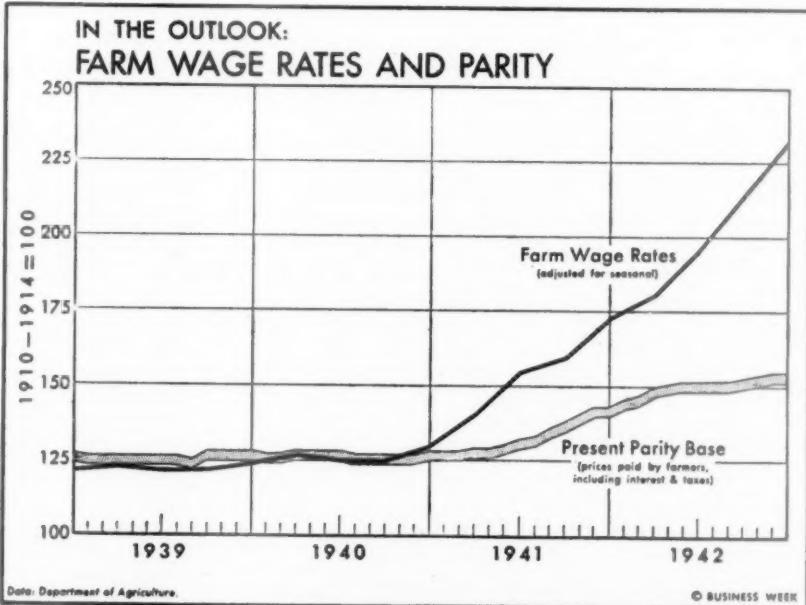
tional record, per-acre yields could drop 12%.

The effect on current food, fiber, and fats and oil supplies would be cushioned by slightly larger acreages, and big stocks of feed. But a sign of the rising worry over civilian meat output is the recent boost of the corn-acre goal from 95,000,000 to 100,000,000 as compared with 91,000,000 harvested in 1942—a gain to be achieved by reductions in other crops.

Even more vulnerable than meat, production of which theoretically can be jumped, is dairying. Last month's new milk supply was but 1% bigger than in December, 1942, and poor weather or lack of labor could quickly cut total output.

"Soft Goods" Off

As compared with the drop in civilian supplies of everyday "soft goods" generally (page 44), the pinch in foods, percentagewise, a mild one. Not only new output of such goods will be off, but also inventories of manufacturers and jobbers have, in many cases, already



The farm bloc's pending move in Congress to revise parity definitions by including wage rates at a weight of roughly 35% isn't hard to understand. Prices farmers receive are broadly based on maintenance of the relation between prices and costs in the 1910-1914 period. In 1939 and 1940, wage rates and other farm costs weren't far apart. But increasing competition for labor from industry has boosted farm

wages—34% in the last year alone—whereas other costs have been steeper, especially since the retail price freeze. The new parity definition would permit higher farm prices, jumping living costs by 4%. A further rise this year of 30% in farm wages would then mean further price advances—3% in over-all living costs. This would touch off other wage demands, setting the price spiral to work.



Before the National War Labor Board gave up on the anthracite strike and threw the problem into President Roosevelt's lap, it called leaders of the strikers to Washington. NWLB

Chairman, William H. Davis, in a heated board session, vainly urged Bernard Swankoski (center) and Michael Kosic (right), delegates from the struck fields, to get the mines operating again.

been so far drained as to aggravate the drop. For instance, even though new wool allocations to civilians are up, the outturn of women's coats and suits will be down this season from last year, when large stocks of cloth could still be used up.

Buyers are jamming New York City's gigantic wholesale markets and are often leaving empty-handed.

As retailers' inventories, already declining, begin to reach rock-bottom, the temptation to evade jumbled Office of Price Administration ceilings mounts. But OPA, which has well underway a standardization of food product prices, has now launched a nation-wide drive against the black markets in meats and will fairly soon tackle revision of clothing ceilings to facilitate consumer enforcement.

Labor Threat

For, price violations add fuel to the fires now slowly burning in labor breasts. Such "unofficial" advances in living costs may do as much damage as "official" jumps. And, more significant than the current troubles in anthracite are the harbingers of labor troubles this spring in bituminous mines (page 64).

A month ago (BW-Dec. 26 '42, p13), Business Week pointed out that pressure for increased wages was rising, and that price troubles could heat simmering labor demands to boiling point. That is not at all impossible in coming months. If labor peace and the present wage stabilization policy prove irreconcilable, it's the latter that's more likely to give.

"Work—or Else"

Roosevelt's ultimatum in anthracite miners' strike against own leaders paves way for troops to take over.

President Roosevelt intervened in the anthracite strike with bold words—but nobody expected any immediate or complete union capitulation before the Thursday noon deadline on his back-to-work-in-48-hours-or-else order. The shortage of hard coal had not been as dire as predictions; the unions felt they still had a little rope left. They figured that even such drastic action as the use of troops would play into their hands in the final analysis.

• **Strike Against John L.**—This shapes up literally as a labor dispute, imbroglio between the hard coal miners and their national leadership, notably John L. Lewis, United Mine Workers president. The rank-and-file struck against an increase of 50¢ in their monthly dues. Both employers and government agencies failed to propose an acceptable compromise, and it had to go to the President.

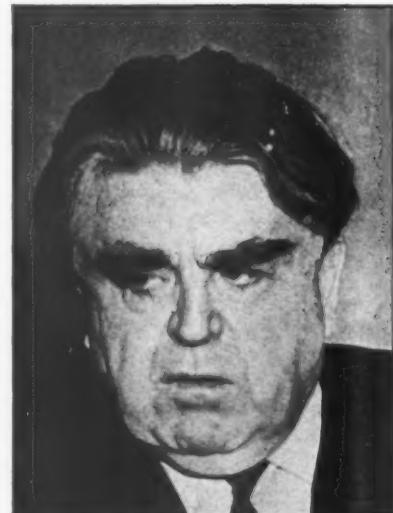
Lewis and his coterie of fellow officers maintained that they were without authority to rescind or modify the higher dues order. It had been voted by a U.M.W.A. convention. The anthracite miners charged, however, that it had been imposed on them against their will.

Because contracts call for U.M.W.A. dues to be checked off individual paychecks by employers and forwarded to the union treasury, the only way the miners had of stopping the collection of the increased dues was by stopping work.

• **Then a New Demand**—Originally a spontaneous uprising against the policies and leadership of their own union, the miners' walkout found a second objective in demands for a \$2 a day pay raise. Lewis agents who visited the strikers assiduously fostered the wage increase sentiment, hoping to convert the strike against Lewis into a walkout for wages that would leave their chief's leadership unchallenged. In this they were only partially successful. The more-money slogan became a supplement to, instead of a substitute for, the original lower dues demand.

Seeing this, Lewis, in a public appearance before the National War Labor Board, repudiated the strike but took cognizance of the wage issue by promising to lead a fight for more pay when coal contracts expire in April. His promises of reprisals against miners who struck in defiance of his authority moved only a handful of them to return to work. Similarly, a strong statement from a unanimous NWLB got only a fraction of the dissident miners back into the coal pits.

It then was up to President Roosevelt to fire the last verbal shot. He gave the strikers two days in which to get back on the job or face "the necessary steps" that the government would take "to protect the security of the nation."



John L. Lewis, once more up front on the labor stage as members of his United Mine Workers in the hard coal fields quit work, threatens to be much more than a mole in the public eye until problems in bituminous mines also are settled (page 64).

Bottlenecks Again

Present slowdowns in production are traceable not to the smelters or the assembly plants, but to the factories turning out component parts; materials flow to be stepped up.

The well publicized competition for parts among the synthetic rubber (page 17), high-octane gas, and escort vessel programs has demonstrated that rationalization of war production still involves technical manufacturing problems as well as the smoothing of material flow. And in so doing, it has also demonstrated that WPB's production vice chairman, Charles E. Wilson, is not the fifth wheel he appeared for a time to be, that he has a real job to do.

• **Revamped for CMP**—The overwhelming recognition last summer that the business of manufacturing munitions had been substantially licked and that the supply of basic raw materials was going to set the limit on over-all war production, the consequent necessity of organizing the most efficient flow of materials possible, and the chaos into which the priority rating system had fallen—all resulted in WPB concentration on the priority problem. Ferdinand Eberstadt brought forward his Controlled Materials Plan, and almost the entire WPB was revamped into a material-distributing shop.

Even at that time, however, it was realized that there was another problem, a production problem, that had to be licked. It was not in the munitions factories, which were going great guns, but in the plants producing parts, fittings, forgings, castings—in short, components. It was shortages of these components, rather than of ingot, that was causing the immediate slowdowns in the factories. Said *Business Week* (BW—Aug. 8 '42, p16):

"Knudsen, production authorities in OPM and WPB, and the Army buyers failed to realize that each big arms assembly plant is simply the apex of a pyramid—the miners and ingot producers at the base with the suppliers and fabricators in between. The base can't be expanded much, and next year it will set the limits on capacity. But the present trouble is in the area midway between the base and the apex.

"So far, most of the contract-letting and plant-building theory has been that if the end-product capacity were created, the normal processes of business would provide the underlying capacity. It hasn't; not fast enough anyway."

• **Rubber, Gas, and Ships**—The solution of this problem is the most urgent of those facing Wilson. Rubber, 100 octane, and escort vessels are the top priority jobs for this year. And all of them are being bogged down by their competition for valves, heat exchangers,

gears, blowers, forgings, crankshafts, etc. Wilson and the services have prepared a list of 34 such items which are used by several agencies and for which the demand exceeds the supply.

Such of them as are not already class B products under CMP are being so classified, which subjects them to WPB scheduling.

Wilson has assigned his scheduling aide, Ralph J. Cordiner, the job of stepping up the production of these items and distributing them equitably among the competing programs. Cordiner is a former General Electric man whom Wilson brought in from the presidency of Schick, Inc.

• **Room for Standardization**—A quick survey of the demand for the 34 items has already revealed a lot of room for standardization. Different agencies and different bureaus of the same agency are ordering items that are substantially identical but with hundreds of little differences that are just big enough to mess up production.

Wherever production of these critical items is being held up by materials shortages, Cordiner is arranging with

the requirements committee for approval of AAA ratings on their needs. The idea is to feed as much material into these critical plants as they can handle. The total quantities are small, and they are causing delays that bulk large.

• **Conversions Possible**—In some cases, existing facilities will be converted to the manufacture of these critical items. The construction of new facilities is not being contemplated at the present time.

Wilson and Cordiner are lining themselves up for two other major scheduling jobs. The CMP throws the responsibility for scheduling production of class B items on the WPB industry divisions, now under Eberstadt's jurisdiction. Wilson, however, is taking on the job of setting up scheduling units in the divisions, bringing in men who have had experience with production in industry. The divisions appear now to be gravitating toward Wilson's corner of the shop.

• **Wilson Checks Schedules**—The other job is overseeing the internal scheduling done by Army, Navy, and the other claimant agencies. Arrangements are being worked out by which all production schedules will clear through Wilson's office before going to the requirements committee. He will check on their feasibility from the production point of view before the requirements committee studies feasibility in the light of material supply.



MIGHTY SMITH

In action at Chevrolet's new plant are four massive 35,000-lb. steam hammers, raising the concern's status to that of second largest producer of

aluminum forgings in America. Using converted automotive machinery, the plant will supply aircraft parts as well as needs of General Motors. The first forging was an aluminum variable-pitch propeller blade.

Housing Jam

With 320,000 houses for war workers needed this year, NHA develops a new plan for one that failed.

The National Housing Agency has decided that its three-months-old program of stirring home owners into leasing properties to the government for conversion into war-worker apartments (BW-Oct. 24 '42, p24) was a flop. About 5,000 properties were offered under the voluntary system; to date about 20 have been accepted. The rest are residential flotsam—homes mortgaged to the hilt, barn-like mansions far from transportation facilities, and houses in zones where conversion to apartments is prohibited.

• **A New Plan**—Now NHA (through Home Owners' Loan Corp.) will try to pep up its housing hunt by putting real estate brokers on the trail. These middlemen will be paid—in some instances, indirectly. That is, the broker gets his share by representing the owner in deals with the government. In other cases, HOLC will pay a fee for every acceptable house reported.

Simultaneously, the program will be needed from two other angles (1) HOLC will take over partial properties, such as unoccupied top floors of houses, and (2) temporary conversions will be made in areas where permanent multiple dwellings are banned.

• **Leases Are Long**—In general, however, the conversion program remains the same. Properties are leased for seven years or until two years after the emergency ends (whichever is longer), and the government assumes full responsibility for conversion, management, and upkeep at public expense. Rents presumably will permit the government to break even.

Reason for increasing emphasis on conversion is the fact that new building is woefully short of needs. Here's what's happening:

WAR HOUSING COMPLETED IN 1942

Privately built	150,000 units*
Publicly built	128,000
Total	278,000

* Not including a possible 150,000 additional units completed before the extreme priorities pinch.

WAR HOUSING PLANNED FOR 1943

Public units under construction	214,000
Private units under construction	80,000
Public units planned	170,000†
Private units planned	170,000
Total	634,000

† First six months only.

Thus, at the outside, this program—even if it goes on schedule—will bring around 1,000,000 new units. Yet minimum requirements for fiscal 1943 are 1,320,000 units. The 320,000 lag must be filled by more efficient use of existing structures.

• **More Materials Assured**—WPB provided a big boost to both the conversion and the new building aspects of the program this week by granting a blanket AA-3 preference rating on all materials going into NHA projects. Permanent and temporary housing is eligible for the higher priority, regardless of whether it is financed publicly or privately.

Assuming that higher priorities and NHA's membership as a claimant agency under the Controlled Materials Plan, next spring, solve problems of materials shortages, another hurdle remains—that of appeasing private builders. They are supposed to erect about 50%

of the new units, while NHA farms out the remainder to private contractors. • **Heat on Ceilings**—The 50-50 arrangement is acceptable to private builders, but they don't like WPB's housing standards or OPA rent ceilings. Currently WPB restricts the amount of critical materials going into a dwelling, wherefore private builders are complaining that victory houses will have no sales appeal after the war. Heat is being put on WPB to raise its standards, and there's a fair chance of success.

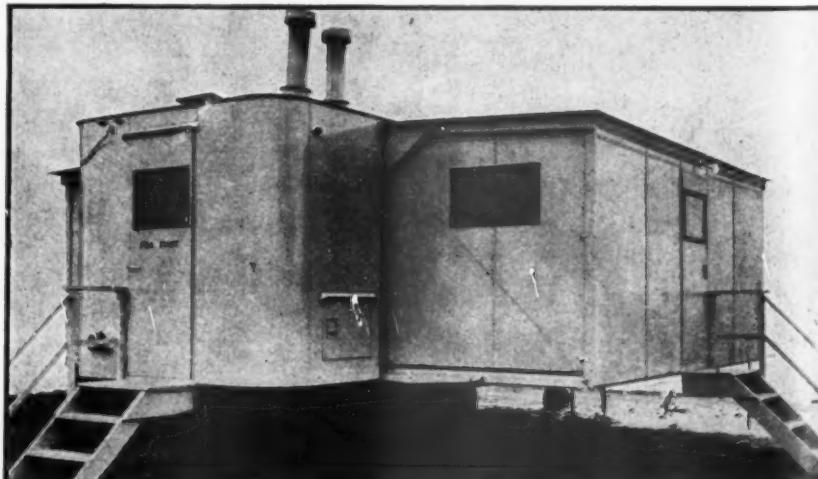
Because of all these hurdles, NHA will continue to underscore the conversion program with increasingly heavier strokes. Commandeering and billeting have been mentioned as a last resort but won't come very soon, most likely not at all. It may be simpler to let war workers sleep in "eight hour beds"—or get WPB to fork over more steel and lumber.



JKU BOX LAUNDRY

Containing all conveniences of home basements including tubs, ironing equipment, and coin-operated washing machines, laundry trailers are being produced to conform with Fed-

eral Public Housing Authority's trailer park edict of one to every 50 residential units. Built by the Palace Travel Coach Corp., Flint, Mich., the laundries are expandable, opening to 20 ft. x 21 ft. (8 ft. x 22 ft. hauling dimensions).





PUNCTURE-PROOF

Wooden tires built up from four laminated sections and bolted together to fit regular truck rims have been devised in the repair shops of Dugan Bros. bakery, Newark, N. J., for use on a number of its 1,200 trucks. Thick brake lining, fitted on as a tread, provides a fairly smooth ride on paved streets, a good jolting with plenty of rumble on rough ones, but absorbs enough shock to keep the lumber shoes from splintering. Drivers report the tires wear well but hope for improved future cushioning.



Rubber Reaches Its Crisis

Unless U. S. synthetic production pushes to at least 200,000 tons in 1943, verdict will be "too little and too late." Program is 30 to 60 days behind; big pinch comes in August.

Almost a year after Rubber Reserve Co. announced the creation of a patent pool from which a \$600,000,000 synthetic rubber industry would flow, government rubber remains a program that has not yet been translated into production.

• **Crisis Is Now**—In terms of military importance, the effort to establish chemical rubber on a mass production basis may be considered a second battle of Singapore. Victory or defeat turns on tonnage that can be produced this year. Total capacity of 1,106,000 long tons, all scheduled to be in operation during 1944, is a secondary issue. The urgent problem is to produce this year a bare minimum of new synthetic rubber—200,000 to 300,000 tons.

The Baruch report (BW—Sep. 19'42, p15) said that 450,000 tons would not be an excessive goal for 1943, but now to attain even such a figure as 300,000, the program would have to click with

never a slip. Fortunately it is not necessary to attain the figure forecast by Baruch in order to meet military requirements. But, the experts say, if new output falls below 200,000 tons—and that's distinctly possible if production bugs and monkey wrenches continue to slow down the new government-financed synthetic plants—our military rubber situation would be another story of too little and too late. Certain it is that whatever we get this year will come largely in the last half.

• **Speed Is Essential**—The impending crisis in rubber hinges on the speed with which new plants can be put into operation. It's important to remember that tonnages in the government rubber program usually refer to annual capacity. That means capacity in 12 months' operation, after breaking in the new processes, and not capacity for the year in which the plant is completed.

In charting our rubber situation, the

War Production Board has made an effort to balance supply against essential requirements, month by month. If we could win the war during the first half of this year, there would be no concern about our rubber supply situation. But a projection of supply and demand factors in the rubber equation beyond July, 1943, tells why both the rubber industry and the government are worried sick.

• **Supply and Demand**—The carryover, or stock on hand at the beginning of this year, is around 400,000 tons. That's saving our necks now. Natural rubber imports are extremely uncertain quantities. Various guesses range from 36,000 to 150,000 tons for the year. Take 50,000 for a compromise. Add 30,000 tons, last year's figure, for non-government production of synthetic—that which comes from private industry, such as Goodrich Ameripol, du Pont Neoprene, Goodyear Chemigum, Dow Thiokol, and so on. Guayule and other substitute sources of natural rubber in this country are not expected to provide additions of any great importance to the rubber supply.

This adds up to 480,000 tons, without any new government rubber. The estimate of cut-to-the bone requirements totals 577,000 tons. On paper, then, we need only about 100,000 tons of new synthetic rubber to skin through 1943. But that's not the right answer, because the rubber companies need a working stock of 100,000 tons to maintain continuous operations. If you add another requirement that's been freely discussed in the industry, a 100,000-ton backlog of natural rubber to mix with synthetic in the making of heavy duty tires, you get over-all requirements of 777,000 tons, against a visible supply, without new government rubber, of 480,000.

• **Some Possible Outs**—Jeffers may find one possible cushion in the import estimates. WPB sources have placed these at 3,000 tons a month or 36,000 for the year. The guess of 150,000 tons has been credited to military sources. How effectively the Navy can deal with the submarine menace to our shipping lanes will decide the question.

The only other supply cushion is reclaimed rubber. Present visible supply is estimated at 700,000 tons, about two years' capacity for the reclaiming processors. Reclaimed rubber, which is the most easily worked kind of rubber, while synthetics are hardest and natural rubber is in between, is ideal for rubber heels, soles, and belting. But it's not much help in meeting high-specification military requirements. The reclaim supply does offer hope that many kinds of civilian rubber demands can be met, although not necessarily with first quality products.

What worries the industry, of course, is the supply of high speed rubber for

tanks, guns, transport trucks, and aircraft landing gear. The only solution, it's generally agreed, is volume production of synthetics.

• **Behind Schedule**—The WPB expects the shortage to pinch first in August and continue until the end of the year. Rubber Director William M. Jeffers said recently the rubber program was 30 days behind schedule, meaning the Baruch schedule. On this basis, the rubber supply would fall below the industry's danger line of 100,000 tons of working stock in September and stay below it all the rest of this year.

Sources outside the government said that Jeffers' estimate of delay was conservative, that 60 days would be nearer the truth, although some of this time may be made up later.

• **Conflicting Material Needs**—In his effort to "bulb through" the rubber plant construction program, as advised in the Baruch report, Jeffers recently has run into a conflict of urgency with the Army and Navy. In the present war situation the military feels that the materials needs of aviation gasoline, escort vessels, and merchant ships should be

considered ahead of those of the new rubber plants. All four programs need construction steel, and both butadiene and aviation gasoline plants demand practically the same kind of processing equipment.

The Baruch report gave advance notice that such a conflict was possible. Every technical man knew it would come. But instead of dealing with it in advance, by stimulating all doubly needed production, WPB waited until Jeffers began to holler bloody murder. The whole dispute went to the White House, then bounced back into the lap of Economic Stabilizer James F. Byrnes.

• **Baruch Takes a Hand**—At the hottest point of this controversy, Baruch got on the telephone and began to preach the gospel of urgency to valve manufacturers, heat exchange builders, piping fabricators, and other suppliers of disputed materials. He also went to work on some key men in the WPB.

One result of Baruch's intervention was the fixing of definite responsibility on WPB Vice Chairman Charles E. Wilson for expediting rubber program materials. Both Jeffers and Wilson are

now concentrating on the butadiene plants, the most critical part of their critical new industry.

• **What the Program Is**—The government program is roughly three-fourths GR-S, a substitute rubber called buna-S in the Baruch report, and three-fourths of GR-S is butadiene. Petroleum companies make butadiene; chemical companies make butadiene and styrene (see glossary); rubber companies collect these feed stocks and make rubber.

The first government butadiene should have been in production two or three months ago, but it's not coming through yet. Present schedule is to open the first butadiene unit (Carbide & Carbon) at Institute, W. Va., toward the end of this month, with a junket of visiting officials and newspapermen. This unit and a second at Baton Rouge (Standard of Louisiana) together comprise only 5% of the butadiene program. There will be second units at both these locations, plus a dozen other plants in West Virginia, Louisiana, Kentucky, Pennsylvania, Ohio, Texas, and California. A fifteenth plant is being built in Canada.

• **Petroleum vs. Alcohol**—The Baruch report divided butadiene production between petroleum and alcohol processes roughly on a 60-40 basis, with petroleum having the larger share. Latest WPB tabulations show that this has been changed to about 70-30. Petroleum is getting a larger share by virtue of what is erroneously called a "quickie" plant. The "quickie" was supposed to be a converted refinery. Actually it turned out to be a new plant put together mostly with used equipment.

Agricultural alcohol, however, is now getting a "break" because of the demands on petroleum of the new aviation gasoline plants. Significantly, the butadiene plant that will get into production first (Institute, W. Va.) has an alcohol process. Although the operator, Carbide & Carbon Chemical Co., has been an important user of alcohol from petroleum, its butadiene alcohol is to be supplied from grain fermentation plants.

The slow motion that seems characteristic of the chemical rubber program, in comparison with other phases of American war industry, is accounted for by a number of factors.

• **Technological Difficulties**—No chemist can put petroleum or alcohol into one end of a test tube and take synthetic rubber out of the other. There is no magic formula. The equipment required to make butadiene, styrene, and other feed-stock hydrocarbons and to collect rubber out of these products is so complicated that in normal times a big company might allow itself from six months to a year after construction for breaking in the processes.

The Baruch report indicated that synthetic rubber engineering was practically complete. Actually, considerable engi-

Synthetic Rubber Glossary

Familiar to the industry but strange to most laymen is the language of synthetic rubber. A beginner's glossary might include these terms:

Butadiene, the principal feed-stock item in the government's rubber program, is obtained from petroleum, alcohol, or other hydrocarbons. A gas at ordinary temperature, it is easily liquefied by cooling. Smells like illuminating gas.

Butane is a gas, formerly a waste product of petroleum refining, from which butadiene can be made.

Butylene glycol is a product of corn fermentation which can be used in making poison gas or butadiene. It's getting considerable study in field laboratories of the Department of Agriculture.

Styrene is a liquid at ordinary temperatures, smells something like retching gas. It's obtained most readily from coke oven by-products.

Polymer is the process that puts the stretch in the chemical product by changing the molecular structure of its component material, without changing the chemical analysis. **Copolymerization** is a joining of molecules that affects two different substances at once, such as both butadiene and styrene in making GR-S.

Synthetic rubber is a misnomer, chemists say, because the factory product does not duplicate the chemical structure of natural rubber. A better name would be substitute rubber (sub-rubber), or elastomers.

GR-S stands for government rubber, type S. No. 1 in the government program, it's copolymerized from butadiene (75%) and styrene (25%).

"**Buna**" is a German word for a similar product, "bu" for butadiene, and "na" for sodium, which is Latin for sodium. The American process doesn't use sodium, therefore "buna-S" isn't technically correct.

GR-I is butyl rubber, No. 2 in the government program. "I" is for isobutylene, principal feed stock used in GR-I. This is a general purpose rubber, excellent for many mechanical purposes but lacking snap.

GR-M is du Pont's neoprene, a super sub-rubber having stretch, snap, and resistance to oils and solvents. Compounded from vinylacetylene and hydrochloric acid, its production cost is relatively high. No. 3 on government program.

GR-P is thiokol, developed by Dow. Inferior to GR-S and GR-I for tires, it's to be used for low-speed retreads and for bags to convert freight cars into gasoline or petroleum carriers. No. 4 in government program.

Buna-N is the fifth important synthetic rubber but is not part of the government program. It's used for bullet-sealing gasoline tanks.

neering design remained to be done (BW-Jan.16'43,p7), and the supply of plant material supply remains an open question, at least to the extent that additional alcohol for butadiene seems necessary. The WPB has before it new distilling plant designs that use a minimum of critical materials; hard wood and glass, for example, rather than copper tubing.

• **New Processes Cold-Shouldered**—If the Baruch report were being written today from the vantage point of hindsight, it might recommend an immediate decision on "insurance" supplies of alcohol and butadiene. It's now realized that Rubber Reserve failed to buy such insurance. It kept all its eggs in one patent pool, and outsiders who offered rubber-making and rubber-buying schemes loudly complained of a quick brush-off.

One of the biggest brushers was Publicker Commercial Alcohol Co. Its proposal to make butadiene from alcohol by a process it obtained from a Polish refugee, Wacław Szukiewicz was met with an offer of only \$25,000. Publicker refused and proceeded to spend \$350,000 of its own to show the RRC how wrong it was. The resulting 1,500-ton pilot plant, based on a process the company feels already has been tested adequately, awaits only a WPB go-ahead for final equipment. Until after Jeffers took over, Publicker claims it could get no consideration on equipment priorities.

• **Bungling**—The WPB is primarily responsible for dawdling with the rubber program, although most outside observers vote a big share of blame to the RRC. Regardless of the past, WPB now has direct responsibility.

• **Conflicting Interests**—The biggest names in rubber, oil, and chemicals long have been deeply interested in synthetic rubber. Each wanted its share, if not dominance, in the rubber program. Although Rubber Reserve was able to form its patent pool a year ago, there was no well organized cooperation such as the automotive manufacturers achieved through their active and effective Automotive Council for War Production.

• **Lack of Drive**—A high-speed drive toward a goal requires teamwork, and that hasn't been a notable feature of the rubber program. Rubber Reserve set no speed records; Nelson didn't tackle the problem with any earth-shaking impact. Jeffers, an able man willing to fight for every inch of ground, came from transportation rather than production and therefore must depend on subordinates for his technique in the production battle.

Despite these troubles, synthetic rubber has come a long way from its 2,500-ton beginning in 1939, and if we can skin through 1943, the future, with its 1,100,000-ton promise for 1944, looks clear.

War Food Boss

Technically, Wickard will issue the orders, but to food men, Hendrickson will be head man in agriculture.

After six weeks devoted to setting up his organization, Roy F. Hendrickson, head of the Dept. of Agriculture's Food Distribution Administration, is beginning to function as the actual food administrator of the war. Technically speaking, orders will be issued in the name of Secretary of Agriculture Claude Wickard; but, in the view of food processors, distributors, and consumers, Hendrickson is the nearest counterpart to the Herbert Hoover of the last war.

• **Two Jobs from One**—When President Roosevelt gave Wickard complete control over food on Dec. 5, the secretary split the job into two parts: (1) Food Production Administration, which amounted to concentration of the department's farm activities into one grouping for conversion to a real war basis; and (2) the Food Distribution Administration, which converted the old Agricultural Marketing Administration from a lend-lease procurement and domestic relief distribution organization into a "food administration."

If Wickard is to succeed in the food job, he must perform a miracle (BW-Jan.16'43,p5). Thus far his progress is nothing spectacular. While Hendrick-

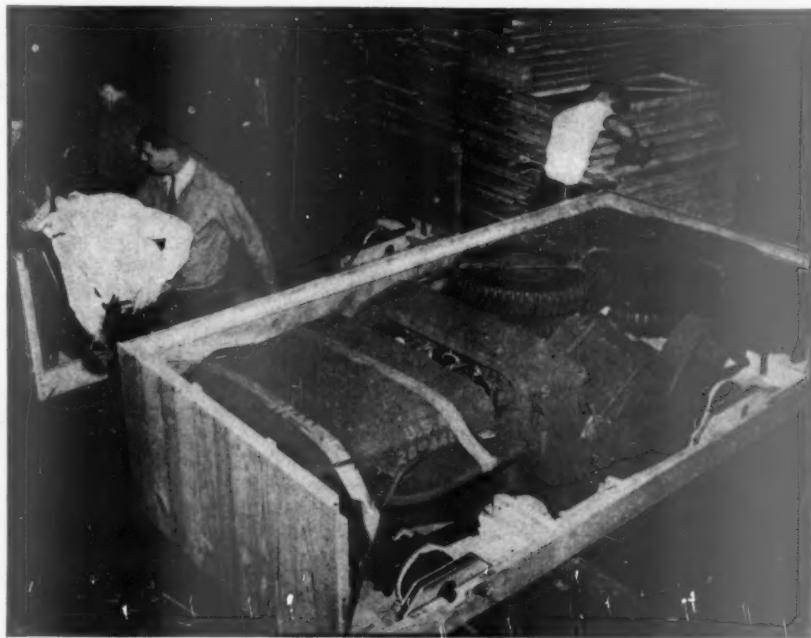
son's FDA was slow getting down to work, Wickard's FPA didn't ever get beyond an internal civil war over basic farm production policies. This culminated in last week's resignation of Herbert W. Parisius, originally named to head FPA.

• **Liberal vs. Conservative**—This civil war found the liberal-minded Farm Security Administration pitted against the conservative-minded Farm Credit Administration and Agricultural Adjustment Administration. Parisius represented the former—he wanted to pull out all the stops and force farm production skyward under the pressure of easy credit and other liberal policies for small and marginal farms.

Parisius charged that the Farm Credit-AAA combine was dominated by the banker-type mind. Without comment, Wickard named former Gov. Clifford Townsend of Indiana as head of FPA, with J. B. Hutson, on leave from Commodity Credit Corp., and A. G. Black, governor of Farm Credit, as his deputy directors.

• **Lost Six Weeks**—Thus Wickard replaced Farm Security in the FPA saddle by the very people who had prevented Parisius and his group from getting under way. Had Wickard taken decisive action earlier in this controversy, the valuable six weeks between the President's executive order and Parisius's resignation might have been saved.

It is significant to note that the Administration-minded Farmers Union was the only farm organization to regret Parisius's departure. The other ma-



COMPRESSED JEEP

Folded up like a Murphy bed, a jeep starts life in one of the new "victory"

crates designed by Willys-Overland to reduce required shipping space from 168 to 141 cu. ft. Also in the crate is a carton of replacement parts.

Who's Who in Food Distribution

Personnel in the key spots in the Department of Agriculture's Food Distribution Administration, as chosen to date, follow:

DIRECTOR

Roy F. Hendrickson.

DEPUTY DIRECTORS

C. W. Kitchen (commodity branches); Jacob Rosenthal, assistant.
E. A. Meyer (facilities, processors, wholesalers and retailers, manpower).
Maj. Ralph W. Olmstead (compliance, programs, transportation and warehousing).
J. S. Russell (civilian requirements and programs, conservation).

COMMODITY BRANCHES

Livestock and meats, E. H. Reed.
Fruits and vegetables, W. G. Meal.
Fats and oils, T. L. Daniels.
Dairy and poultry, T. G. Stitts.

Special commodities, H. C. Albin.
Sugar, Joshua Bernhardt.
Cotton and fiber, Carl H. Robinson.
Tobacco, Charles E. Gage.
Grain products, H. J. Murphy.

REGIONAL ADMINISTRATORS

Northeast (headquarters, New York), Buell F. Maben.
South (headquarters, Atlanta), James H. Palmer.
Great Lakes (headquarters, Chicago), E. O. Pollock.
Midwest (headquarters, Des Moines), Russell Mather (acting).
Rocky Mountain (headquarters, Denver), Leonard R. Trainer (acting).
Pacific Coast (headquarters, San Francisco), Merritt A. Clevenger.
Southwest (headquarters, Dallas), Lester J. Cappleman.

Major farm organizations, including the older Farm Bureau and National Grange, kept a loud silence.

• **One Industry Man**—Apparently with an eye on the farm bloc, Hendrickson put only one food industry man on his key FDA staff—hard-working but unimaginative E. A. "Woody" Meyer, an official of a relatively small Pennsylvania canning company.

Aside from Meyer, only three other key FDA officials came from outside the Agriculture Dept.: Tom Daniels, head of WPB's fats and oils section, was made head of a similar commodity branch in FDA; Dr. Russell Wilder, noted nutritionist of the Mayo Clinic, was made head of civilian food requirements; and Jacob Rosenthal of WPB's food section was named an assistant to Deputy Director C. W. Kitchen.

• **Key Jobs for AMA Men**—In fact, aside from two other key staff men taken from other branches of the Agriculture Dept., Hendrickson placed AMA men in every key spot. Many of these men are department careerists; others were brought into AMA in recent months as Hendrickson planned his organization for the eventuality of a food administration (BW—Dec. 19 '42, p 58).

Nucleus of the new food administration is the nine commodity branches. All operating responsibility will reside in these branches, which will issue and administer all food orders. Thus tremendous responsibility is thrust upon men like E. J. Murphy, who will run the nation's flour and bread supplies.

• **WPB Men Got Crumbs**—Hendrickson didn't get the Budget Bureau to transfer physically WPB's food staff to FDA until the key spots in his organization had been filled with his own men. When WPB's food men came over, the only jobs that Hendrickson could offer to the men who have been running the

food show since Pearl Harbor were as section or unit heads under AMA commodity branch chiefs.

In addition, Hendrickson adopted this politically smart position on dollar-a-year men: Those who came over from WPB have been offered jobs at Agriculture Dept. salaries (about \$4,000 a year for the jobs remaining open). Those who can't sacrifice their outside incomes are being added to FDA's consultation panel. Such consultants will have no administrative responsibility or authority.

Spare That Cow!

FSA deals in livestock to maintain milk production by halting the slaughter of dairy herds.

The Dept. of Agriculture is acting to check cattle slaughter which has reached serious proportions in several important milksheds. Cows will be purchased from farmers no longer able to take care of them because of shortages of labor or feed or because of other problems.

• **CCC Funds Involved**—Field supervisors of the Farm Security Administration will buy such cows with Commodity Credit Corp. funds, sell them to other farmers who can handle them. The program will be initiated in Chicago, New York, and Kansas City milksheds and will be extended to other areas as rapidly as FSA can meet the demands.

For years the department has pressured farmers to get rid of low-producing cows, but because of increased demand for dairy products, the situation has almost reached the point where they are being urged to milk every cow. Instead, many farmers are selling or slaughtering part or all of their herds. Many are taking war jobs.

• **Meat Grades Unaffected**—Department specialists are concerned with the necessity of maintaining dairy herds, although



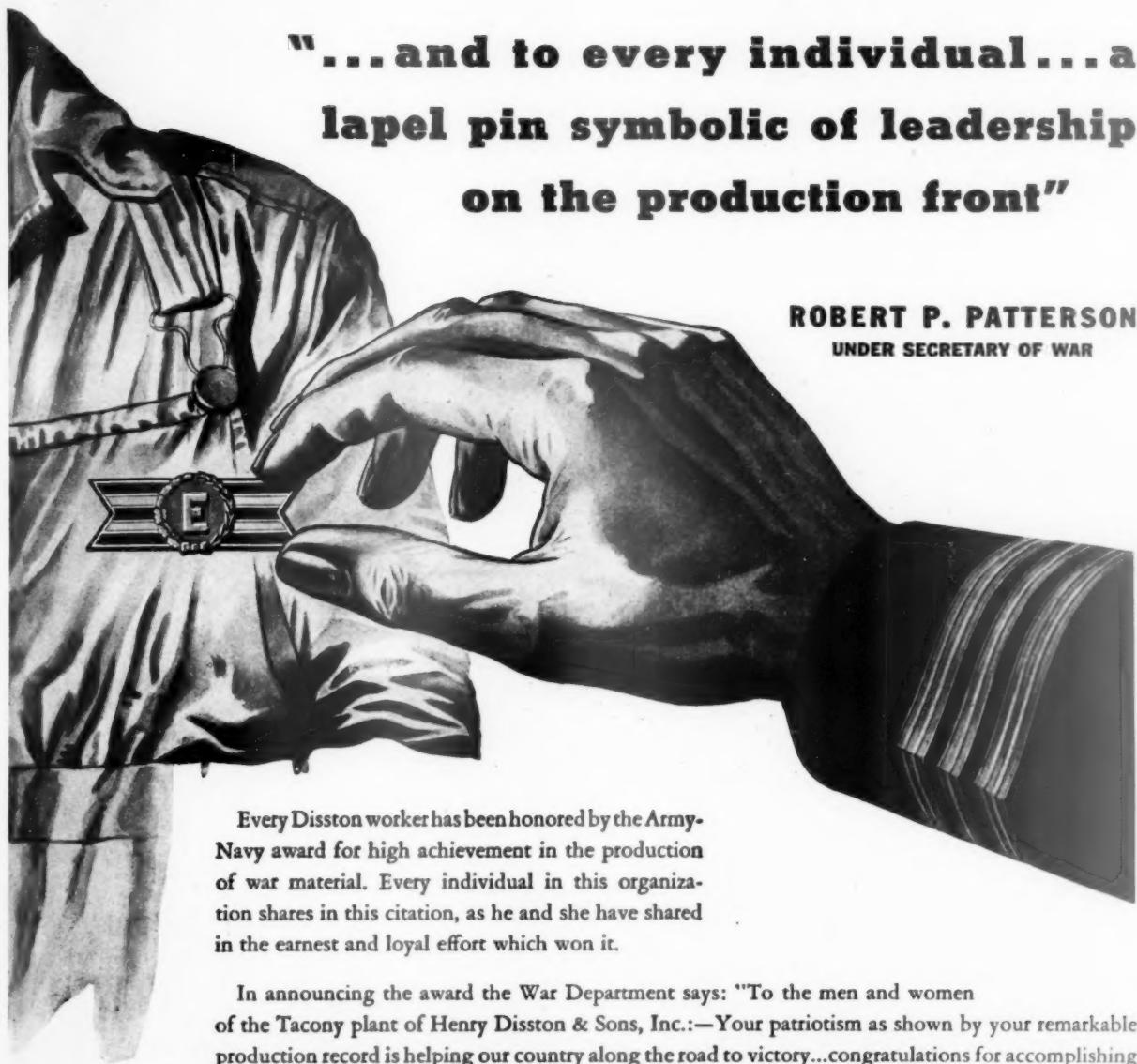
GREEN GOLF PASTURES

On Augusta's famous National Golf Club's fairways, scene of the Masters' Tournament in other years, now roam 50 head of Herefords—sportland's

latest concession to wartime regulations. Since auto restrictions mean the end of normal golfing, officials fenced off greens and turned loose the cattle. With an eye to beef prices, officials plan to double the herd.

**"...and to every individual... a
lapel pin symbolic of leadership
on the production front"**

ROBERT P. PATTERSON
UNDER SECRETARY OF WAR



Every Disston worker has been honored by the Army-Navy award for high achievement in the production of war material. Every individual in this organization shares in this citation, as he and she have shared in the earnest and loyal effort which won it.

In announcing the award the War Department says: "To the men and women of the Tacony plant of Henry Disston & Sons, Inc.:—Your patriotism as shown by your remarkable production record is helping our country along the road to victory...congratulations for accomplishing more than seemed reasonable or possible a year ago."

The "E" burgee that flies above the Disston plant and the "E" badge that Disston men and women wear are more than symbols of a year's accomplishment—they are an inspiration to achieve more, an incentive to keep on producing beyond what seems "possible."



HENRY DISSTON & SONS, INC.
Tacony, Philadelphia, Pa., U.S.A.



Disston workers are producing to the utmost of their ability: Armor Plate for the Air Corps and Army motorized equipment... Steel for Ordnance—37 mm. guns, Steel for torpedo and rifle parts... Motor driven chain saws for Army Engineers... Jungle Knives for the Quartermaster Department... Huge quantities of saws, files and other tools for other government departments as well as for thousands of industrial plants making products essential to victory... at the same time Disston workers are producing the Company's regular products for the essential needs of customers.

FEL-PRO

Stops Leaks!



FELT PRODUCTS MFG. CO.
1512 Carroll Ave., Chicago, Ill.

it is impossible for them to estimate how much milk has been lost to slaughter.

Packing interests express some concern lest the cow rehabilitation program affect normal meat production from canner and cutter cattle grades. Normally, dairy cattle account for as much as 40% of the beef slaughter.

bakers who claimed it was a slap at them to the advantage of big competitors. Braking is a process by which bread dough is fed back and forth through high-speed rollers, producing a larger loaf of finer texture, but destroying flavor if overdone. The process has wide use in small shops, because they seldom have the high-speed mixing equipment that produces a braking effect in large bakeries.

• **Extenders in Doubt**—To help meet cost and shortage problems, the baking industry has substitutes and extenders for their materials. For example, dry shortenings can be used to meet the fat shortage. Some of these with a base of corn flour or lecithin (from wheat germ and soybean) contain approximately 30% fat. But the question is whether the fat in these dry shortenings must be figured into the 2% maximum. If Washington rules that they must, then the industry is faced with the problem of how to do it, for most commercial users do not know the fat percentage of these shortenings.

The same situation exists in dry milk extenders and substitutes, some of which contain a percentage of milk powder and soybean flour—a mixture that closely approximates reconstituted dry milk. Importance of milk extension may be judged by the fact that military and lend-lease channels are soaking up 90% of spray-type dry milk, leaving the remainder and less desirable roller-type for all commercial users. An added headache is OPA's milk ceiling, which leaves a spread of only 1¢ a pound for shipping costs, making it tough on bakers who are a long distance from their sources of supply.

• **Egg Substitutes Limited**—Eggs also are difficult to obtain and difficult to replace in quantity. Government agencies have taken practically all available dried eggs and 90% of the frozen supplies. Although many bakers are using lecithin-base egg substitutes, in a 50% to 100% ratio, the industry consensus is that substitution beyond 30% cannot be made without compromising quality, volume, flavor, or texture.

Sugar replacement has been partially solved with malt sirup, glucose, corn sirup, molasses, and honey. All of these will assume greater stature when an expected extension to the order includes cakes and pastries. Thus far, bakers have increased pastry volume with less than 70% of their former sugar consumption by the use of substitutes and by reducing the types and quantities of icings and fillings.

• **The Flour Issue**—Substitutions and extensions of bakery ingredients have served to point up the fact that neither is available for wheat flour. So, until flour prices are dropped or bread ceilings are punctured (the latter is most likely), bakers will continue to demand permission to boost bread prices.

Bakers' Woes

Cost reductions fail to gag demands for higher bread ceiling because of problems with ingredients.

When the joint OPA-Agriculture Dept. Food Distribution Order No. 1 took effect this week, 30,000 bakers discarded bread frills and prepared to decommission slicing equipment with two major misgivings: (1) whether they'd be able to stay in business in the face of higher flour prices; (2) whether they could obtain, as well as afford, sufficient ingredients.

• **Bakers Are Unimpressed**—Washington had hoped to preclude the first doubt and silence demands for a hike in OPA's bread ceiling by reducing bakery production costs to bare essentials after allowing flour prices to rise an average of 10% Jan. 4, in deference to farmers (BW-Jan. 9 '43, p.22). From the industry's viewpoint, neither intention was accomplished because costs of outlawed frills are relatively negligible (for example, .01¢ per loaf for slicing) and because ingredient difficulties still remain unsolved.

Besides banning slicing, double-wrapping, cross-panning, twisting, and consignment selling of bread, the order makes vitamin and mineral enrichment of bread mandatory and changes ingredient ratios. An eleventh-hour amendment, however, extended to all bread the 60-day exemption from the slicing ban—originally applicable to loaves weighing two pounds or more. These changes call for reduction in bread contents as follows: milk solids from 6% to 3%—4%, maximum sugar or related solids from 6% to 4%, and maximum fat from 6% to 4%. Before the order went into effect, about 70% of the bread was enriched.

• **Some Bakers Complained**—Since ratios are mandatory, bakers of foreign-type breads (Italian and French, principally) complained they have had no experience with milk solids—their products always have been milk-free. To give such bakers time to experiment, the milk ratio order was suspended for three months.

Another last-minute change was made when the original ban on braking was rescinded at the request of some small



He changes junk to **SCRAP!**

"NOTHING IS MORE IMPORTANT TO WAR PRODUCTION THAN SCRAP!"

DONALD M. NELSON

This grand guy knows you're right, Mr. Nelson.

For the SCRAP that he and about 6500 other yard dealers prepare, when combined with smelted iron, contributes at least half of the resultant total tonnage of new steel. The steel industry might as well try to do without iron ore as attempt to produce enough war steel without prepared SCRAP from these yards.

With no thought of praise, nor expectation of reward other than a modest profit, this patriotic little band of scrap dealers will supply more than 20,000,000 tons of vital scrap this year!

Into their yards flows an endless stream of junk . . . out,

to the steel mills, pours a constant supply of SCRAP. Graded to as many as 75 specifications . . . minced by giant alligator shears to foot-square electric furnace fodder . . . flame-cut to suitable open-hearth lengths . . . squeezed by great presses into bale-size furnace charges. Many millions of dollars are invested in special equipment by these dealer yards to prepare SCRAP!

Are these the "forgotten men" of 1942? No "E" pennants or other merit banners flutter from their flagstaffs . . . yet without them few such awards would have been possible.

Forgotten, did we say? Well, not quite. Happily a growing appreciation of their vital contribution can be noted. *Well done, Scrap Dealers of America!*

Pittsburgh Steel Co.
GRANT BUILDING PITTSBURGH, PA.

ERIE RESISTOR Custom Molded Plastics TO THE RESCUE



ERIE Resistor Plastics have come to the rescue of many manufacturers seeking to improve their products and to eliminate critical materials.

The water light shown above exemplifies both objectives. Injection molded of clear plastics, the container and dome weigh but 19 ounces, reducing the weight of the complete light to about 1/5 that of ordinary water lights. The strong, durable plastic material, which is impervious to water, gives excellent protection to lamp and batteries.

If you have a vital materials problem, consult our engineering department for possible substitution of plastics. There is no obligation. Write for catalog.

Plastics Division
ERIE RESISTOR CORP., ERIE, PA.

HANG UP YOUR
FILING TROUBLES
in the filing folder that

HANGS!

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PENDAFLEX*
FOLDERS
reduce filing time 20%

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NO NEW CABINETS
a simple frame fits
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Send me FREE sample of your Oxford Pendaflex folder and new, illustrated, fact-full booklet: "How to Cut Filing Costs 20 per cent". No obligation, of course.

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CEREMONIAL SULK

Georgians look to a new era with the ouster of Eugene Talmadge (right), who stood sullenly last week while Ellis Arnall (left) succeeded him as governor. Arnall, a Roosevelt supporter, will ask Georgia's legislature to retain present tax levels despite an inherited \$35,000,000 debt, thus hop-

ing to coax back business—especially government business lost under Talmadge's regime. Inaugurations like Georgia's were commonplace as the 1943 state legislative sessions got in full swing. All legislatures are now in session, excepting Alabama and Florida, which meet in the spring, and Louisiana, Kentucky, Mississippi, and Virginia, which meet in 1944.

Improved Oats

With the aid of private capital, Iowa seeks to gear its grain quality to quantity in a turn to hybrids.

Biggest oat state is Iowa—5,000,000 acres in a normal year. But quality of Iowa oats, particularly in feed value per bushel, is a reproach to the grain trade. Of Iowa oats marketed in 1940, a banner year for small grains, 76% graded No. 3 or lower; in 1941, a bad year because of rust, 88%. In those years, 80% to 85% of Illinois oats graded No. 1 or better, worth at least 3¢ more per bushel than No. 3.

• **The Millers' Position**—Principal sufferers from low quality of Iowa oats are, of course, Iowa farmers. Running the farmers a close second, however, is Quaker Oats Co., which has the world's largest mill at Cedar Rapids. To maintain an acceptable milling standard in 1941, Quaker had to buy 80% of this plant's oats from other states.

To prepare the 20% of Iowa-grown grain for its first milling required more than 50 costly, preliminary, separating processes to get rid of the admixture of barley, stray oats of other varieties and maturities, mustard, and miscellaneous

dockage. Before intensive deterioration afflicted the state's crop quality, less than a dozen separations had sufficed. In the period 1939-42, to produce a barrel of groats required four more bushels of Iowa than of Illinois oats.

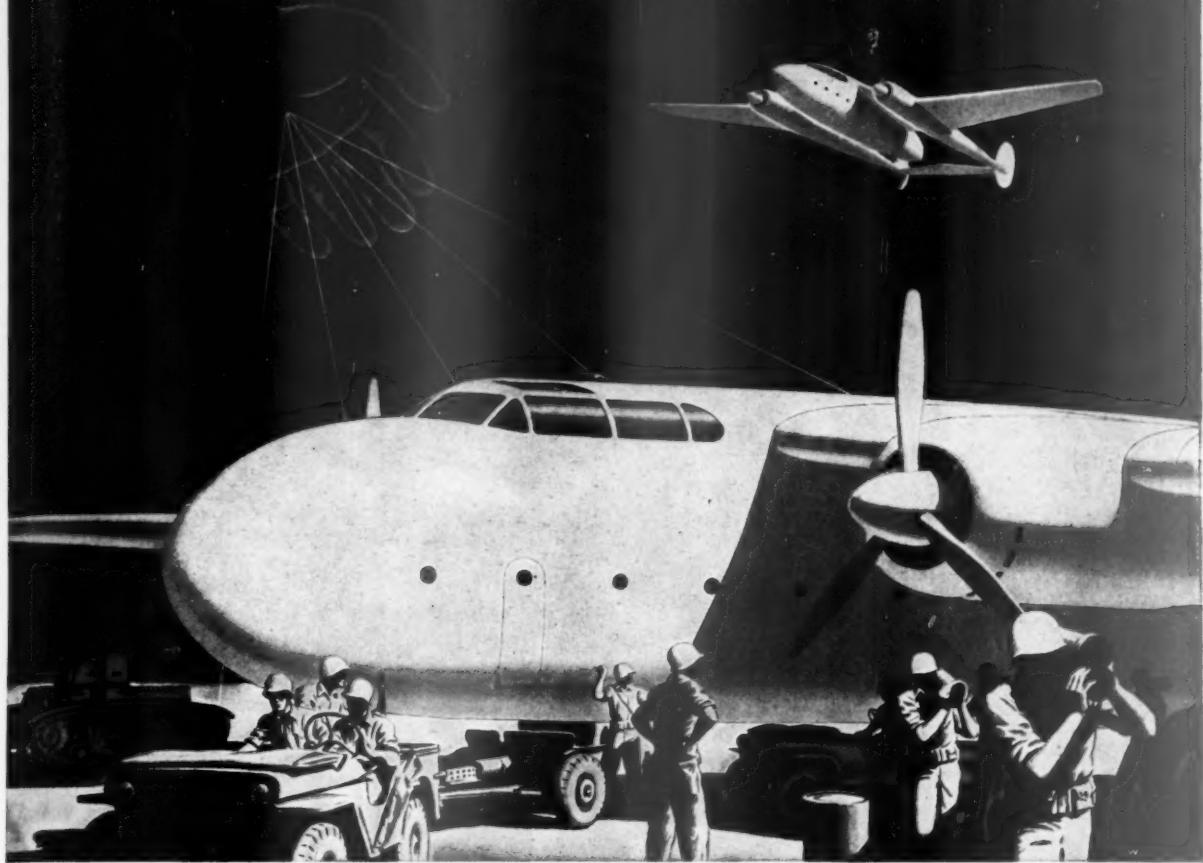
• **Quaker's Campaign**—All this is behind a program that puts agricultural improvement bodies throughout Iowa on the job of convincing farmers that they had better throw into the hog feed home-raised seed oats they have been saving to plant next spring. Farmers are urged to buy, borrow, or swap for one of four new hybrid varieties for this year's planting. Busily boosting the program are elevator men, feed and seed dealers.

Spark plug of the campaign is seldom heard of in this connection. Yielding the limelight and credit to others, but paying most of the bills, including those for a state-wide campaign of advertising in farm papers, city and country newspapers, and radio time, is Quaker Oats Co.

• **Four Hybrids Promoted**—The U. S. Bureau of Plant Industry, cooperating with state colleges, has developed in recent years an entire new strain of hybrid oats which show an even greater margin over old-time oats than does hybrid corn over open-pollinated corn. Iowa's new varieties are Tama, Boone, Control, and Marion.

These are highly resistant to smut,

THE TOUCH OF TOMORROW IN THE PLANES OF TODAY



The New Fairchild Cargo Plane Will Speed Delivery of Tanks, Guns, Troops and Supplies

On that fateful December 7th, Washington opened the drawer marked "Blueprint For a Global War."

"Here's your kind of a job, Fairchild—to develop a plane that can help supply an army on the other side of the world."

Fairchild got that job because it had 20 years of aeronautical research and scientific engineering devoted to "Creating the Plane for the Purpose." Among those planes is a notable line of cargo-carrying aircraft.

Today, Fairchild is building a new cargo plane designed expressly for carrying tanks, guns, troops and

equipment over great distances and for delivery to small fields at the front! Its precise performance and other characteristics are a military secret. It was created out of the needs of this war to fulfil the needs of this war. It bears the Fairchild "Touch of Tomorrow."

Other Fairchild "weapons" for winning the war include training planes, liaison planes, Ranger aircraft engines and the Duramold process for making planes and components of plastic-plywood. And while the new Fairchild military cargo plane is the latest of these, it is by no means the last.

• • • • • "ON THE BEAM"

• • • • • "The dominant note of our common war efforts is unity, unity of our people and unity of the United Nations. That is the hard fact which is the spearhead of Victory."

Franklin D. Roosevelt

[From letter of Nov. 25, '42 to Col. J. C. O'Laughlin]

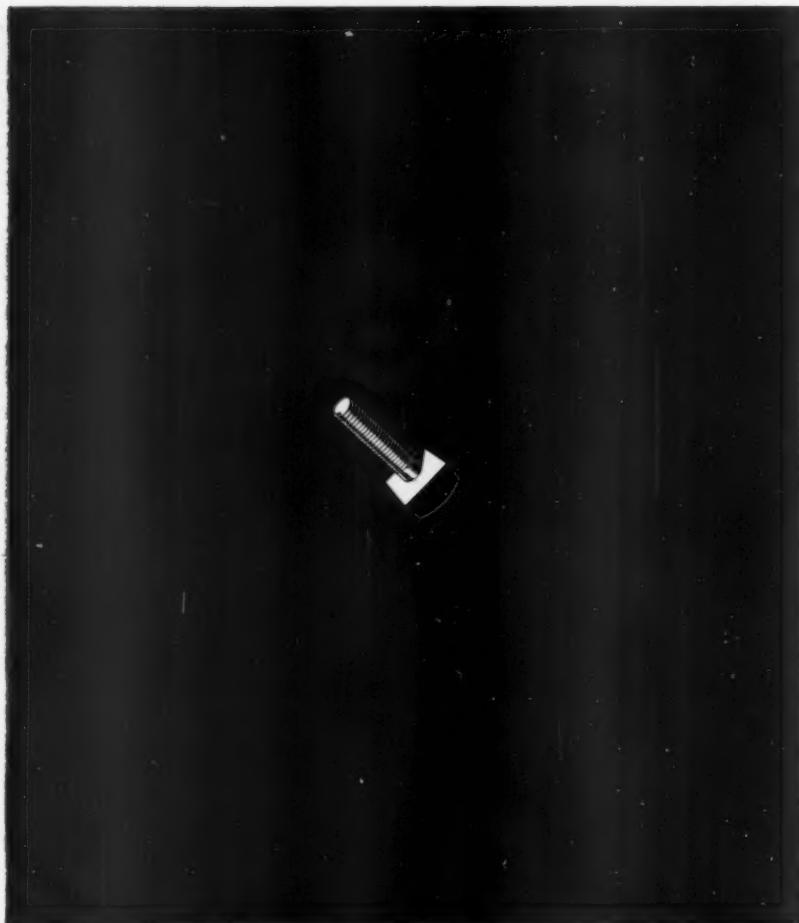


ENGINE AND AIRPLANE CORPORATION
30 ROCKEFELLER PLAZA, NEW YORK

Ranger Aircraft Engines Division, Farmingdale, L. I.

• Duramold Division, New York, N. Y.

• Fairchild Aircraft Division, Hagerstown, Md.



Victory could depend on this one bolt!

The failure of a bolt, a rivet or other small part can conceivably spell the difference between victory or defeat.

Guns which operate with precision gears depend for their accuracy on the quality of the metal in their parts. So do bombs and torpedoes.

No tank, plane, gun, ship or bomb can be stronger than its weakest part. That's why parts for weapons are so important. And that's why precision heat-treating plays so large a part in war production—why Gas

is so widely used industrially today.

Today, at the shoulder of all war industry, stands the industrial Gas engineer, helping to get the most from this fine fuel. You are welcome to his services—if you need them. Call your Gas company today.

AMERICAN GAS ASSOCIATION
INDUSTRIAL and COMMERCIAL
GAS SECTION
420 LEXINGTON AVENUE, NEW YORK



stem rust, and crown or leaf rust which ruins the old-style oat crop about every three years. Yielding more and showing heavier test weights, the new oats will, in a normal crop year, produce about 22% more feed value per acre and in a wet, rust year more than double.

• **Illinois Provided Know-how**—Quaker Oats and the professional crop improvement interests took a preliminary and highly successful workout three years ago on Illinois oats, then almost as poor as Iowa's. In the Illinois job, promoters learned lessons that they are putting to work in Iowa now.

Prime lesson is that when a state reforms its oat cropping, it should do the job in a single season. As long as there are old-style oats around, these inevitably get mixed in with the new. Small grains are not subject to accidental hybridization, but contamination comes through physical mixing—in threshers, in oat bins, and through random over-the-fence planting when Farmer Brown's end-gate seeder slings a few handfuls of his old oats into Farmer Smith's field of newly seeded hybrid.

• **Complete Change Sought**—Goal of the current Iowa campaign is a 100% change over for the state's oat acreage. This is patently impossible, but promoters count on hitting 90% or better. It would not have been possible earlier, because only now have the new varieties been multiplied to the required 15,000,000 bu. of seed.

To make sure the 1941 crop hybrid oats would not be diverted from seed uses, township committeemen last summer visited each farmer who had raised these varieties. Next, they called on all other farmers, urged them to obtain their 1942 seed from those neighbors who had hybrid. Consequence was an epidemic of buying and swapping which practically cleared the market.

• **Livestock Factor**—Particular importance attaches to the oat program because of wartime needs for stockfeed. In recent years, oats have gained recognition among stockmen as ideal feed for poultry and livestock up to 25%–33% of the ration. At present meat price levels, oats for feed are worth up to 80¢ or 90¢ per bushel.

Iowa, like most Corn Belt states, has more livestock on hand and in prospect than it can feed. Current estimates of the 1943 shortage are 45,000,000 feed units, or bushels of corn. If Iowa plants the same oat acreage as last year but converts 100% to the new hybrid varieties, given identical crop conditions, the new oats would provide an estimated 49,000,000 additional feed units—without additional labor.

Slogan of the current campaign is: "In 1943 Iowa must have extra feed units. Congress can't vote 'em. Dollars won't buy 'em. But—farmers can grow 'em by planting nothing but the new disease-resistant oats next spring."



CHICAGO ILL DEC 10

R WUT206BPJW

YOUR IDLE STRAPPING TOOLS URGENTLY NEEDED STOP YOU CAN HELP PREVENT
 DELAY IN SHIPPING AND DAMAGE TO VITAL MATERIAL DESTINED TO FIGHTING
 FRONTS BY LOANING TOOLS NOW STOP SHIP TO ACME STEEL COMPANY FOR
 IMMEDIATE PLACEMENT ON WAR JOBS.

ACME STEEL COMPANY 417P

Because steel strapping helps to assure safe, damage-free arrival to all types of shipments, from crated fighter planes to cartons of canned foods . . . demand for the speedy Acme strap-applying tools has taxed our capacity to the limit . . . all strapping tools are made from critical materials.

How to draft your idle strapping tools for war work

Just send your unemployed Acme strap-applying equipment to Acme Steel Company. These tools will be placed with the armed services and in war plants. On strapping tools made by others than Acme, write the manufacturers.

Tools loaned will be replaced

The Acme tools which you loan to the war effort will be replaced whenever you need them. Or if you prefer, a cash credit, based on their present return value, is readily available. Will you please check up today . . . then let us know how many Acme strap-applying tools you can spare and ship them direct to us.

ACME Steelstrap PROCESS

ACME STEEL COMPANY General Offices: 2828 Archer Avenue, CHICAGO, ILLINOIS

Atlanta • Baltimore • Boston • Detroit • Indianapolis • Los Angeles • Milwaukee • New Orleans • New York • Philadelphia • Pittsburgh
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ACME STEEL COMPANY OF CANADA, LTD., Montreal, Toronto, Winnipeg, Vancouver

HELPING BURROUGHS USERS MEET TODAY'S PROBLEMS
WITH THEIR PRESENT EQUIPMENT

4 VICTORY TAX—MONTHLY

Table of amounts to be withheld from monthly earnings
Example: Earnings over \$72.00. This amount is more than \$60.00, but not over \$80.00. Tax = \$1.60

EARNINGS NOT OVER	TAX	EARNINGS NOT OVER	TAX
\$ 52	\$.00	\$32.00	\$.00
60	.20	36	.40
80	.90	48	1.20
100	1.90	60	2.20
120	2.90	72	3.20

3 VICTORY TAX—BIWEEKLY

Table of amounts to be withheld from biweekly earnings
Example: Earnings over \$36.00. This amount is more than \$30.00, but not over \$40.00. Tax = \$1.20

EARNINGS NOT OVER	TAX	EARNINGS NOT OVER	TAX
\$ 18	\$.00	\$18.00	\$.00
20	.10	20	.20
40	.40	40	.80
50	.90	50	1.80
60	1.40	60	2.40
70	1.90	70	3.00
80	2.40	80	3.60
100	3.20	100	4.80
120	4.20	120	6.00
140	5.20	140	7.20

2 VICTORY TAX—SEMIMONTHLY

Table of amounts to be withheld from semi-monthly earnings
Example: Earnings over \$18.00. This amount is more than \$15.00, but not over \$21.00. Tax = \$1.10

EARNINGS NOT OVER	TAX	EARNINGS NOT OVER	TAX
\$ 9	\$.00	\$9.00	\$.00
10	.10	10	.20
15	.40	15	.80
20	.90	20	1.80
30	1.40	30	2.80
40	1.90	40	3.80
50	2.40	50	4.80
60	3.20	60	6.00
70	4.20	70	7.20
80	5.20	80	8.40

1 VICTORY TAX—WEEKLY

Table of amounts to be withheld from weekly earnings
Example: Earnings over \$18.00. This amount is more than \$15.00, but not over \$21.00. Tax = \$1.10

EARNINGS NOT OVER	TAX	EARNINGS NOT OVER	TAX	EARNINGS NOT OVER	TAX
\$ 9	\$.00	\$ 18	\$.00	\$ 27	\$.00
10	.10	10	.20	20	.40
15	.40	15	.80	25	.80
20	.90	20	1.80	30	2.60
30	1.40	30	3.00	40	3.10
40	1.90	40	4.10	50	4.10
50	2.40	50	5.00	60	5.00
60	3.20	60	6.00	70	6.00
70	4.20	70	7.20	80	8.40
80	5.20	80	8.40	90	9.60
100	6.20	100	12.00	110	14.00
120	7.20	120	14.00	130	16.00
140	8.20	140	16.00	150	18.00

Burroughs

Presented by BURROUGHS ADDING MACHINE COMPANY, Detroit, Michigan

To Simplify Victory Tax Payroll Deductions

As a service to employers, Burroughs has reproduced, in convenient, 8½ x 5½ card form, the official "wage bracket" figures shown in the government regulations for determining the amount to be withheld from the pay of employees. Already thousands of Burroughs users—and others—are using these tables to save the many computations required in handling this new problem.

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When ordering, specify whether you want the weekly, semimonthly, biweekly or monthly tables—and how many of each you require.



James Caesar Petrillo, the musicians' czar, explains to Senate committee that his union's "pancake turners," record changers in Chicago radio stations, get \$90 a week because broadcasters "gave it to me and I couldn't turn it down."

Records Again?

Senate grilling may force Petrillo to end six-month ban on recordings, but there's still the problem of materials.

Not since the midget sat on J. P. Morgan's knee has the press had more fun with a Senate investigation than it did last week when James Caesar Petrillo defended the ban that has kept American Federation of Musicians members from making phonograph records and radio transcriptions since Aug. 1 (BW-Jun.20 '42, p8). Typical repartee was Sen. Charles W. Tobey's suggestion: "a special slot in juke boxes where you could put a nickel that would stop the damn stuff."

• **Strike End In Sight**—But musician's union czar Petrillo is no joke to record manufacturers, juke box operators, and—most of all—small non-network radio stations who now see for the first time in six months the possibility that recording of popular music will be resumed. Before the Interstate Commerce subcommittee put him under pressure last week, Petrillo would have broken the strike only in exchange for protective legislation that would give A.F.M. members a property right in recordings and allow them to collect royalties on each record in the same fashion as the American Society of Composers, Authors, and Publishers (BW-Mar.9 '40, p32) collects tribute.

After two days of evasion and sideshow, under a threat that President Roosevelt would exercise war powers to demand lifting of the ban, Petrillo

agreed to have a plan drafted Feb. 1 to be presented to broadcasters and the recording industry. Some kind of compromise is thought inevitable, but the industry, used to Petrillo's surprise technique, is not prophesying the future.

• **Materials the Big Worry**—Effects of the ban are only now beginning to be felt, thanks to an adequate backlog—(best seller "White Christmas," for instance, was recorded last June). As a matter of fact, it was not the Petrillo ban but only raw material shortages that kept the industry from exceeding the record-breaking 1941 sales total of about 120,000,000 records. Last year's figure is estimated at 110,000,000. Decca Records, Inc., even reports 1942 sales ahead of 1941's \$8,218,145, which itself was a spectacular jump from the previous year's \$5,231,481. Furthermore, retailers' Christmas record trade was the biggest in history, and post-holiday orders are running 334% over the same period last year, although many of them probably can't be filled.

Raw material shortages have been deviling record makers since the War Production Board first allocated virgin shellac for war production (BW—Apr. 18 '42, p34). To the industry no less than to the government, shellac is an essential material and constituted 20% of the material in each disk in the days before the supply problem arose. It pours evenly when the record is pressed, resists heat when the record is played, and keeps surface noise down. India is the only source of supply, and little is imported now.

• **No More Shellac**—Manufacturers' stockpiles, however, might have carried them through several years of war had supplies not been frozen for military equipment. The first cut reduced manufacturers to 30% of previous consumption; in November they were cut to 5%; in December they received none. Henceforth, allocation will be on a monthly basis, and probably negligible.

Only adequate substitute for shellac is vinylite (BW—May 2 '42, p28) which is used for transcription recordings and cuts down surface noises even more than shellac. But use of vinylite would boost costs so that records would have to sell for \$3 a disk. Needless to say, it is not part of manufacturers' plans for 1943.

• **Relying on Reclaim**—Record makers will rely chiefly on salvage. Reclaimed shellac was always used in small amounts—10% to 15%. Now that it is used in greater proportion—at least 50%—records are of only slightly inferior quality.

But secondhand shellac is no panacea for manufacturers. Reprocessing makes production costs higher than use of virgin shellac. And worse than that, producers cannot collect enough scrap. RCA Mfg. Co., which makes Victor records, demands one used record for every three new ones sold to dealers. Other makers have been less strict but



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The strategic location, available manpower and rich natural resources of West Virginia are attracting the attention of executives who are planning now for post-war production and industrial expansion. Perhaps the following questions and answers will give you a better understanding of West Virginia and its advantages.

1 What natural resources are available to industry in West Virginia?

Natural gas, oil, limestone, water power and hardwood timber are among the major natural resources. West Virginia has long been one of the nation's leading producers of bituminous coal—and vast deposits of it remain untouched. There is an unlimited quantity of fresh, mountain water for industrial purposes.

2 Does West Virginia possess favorable transportation facilities?

Blanketing the state is a network of splendid railways and highways—permitting overnight shipments to Northern, Southern, Eastern and Mid-western markets. There is also water transportation direct to Ohio, Allegheny and Mississippi River ports.

3 Is skilled manpower available in West Virginia?

West Virginia's labor force totals about 415,000 men, not counting farmers. New semi-skilled and unskilled labor is being attracted.

4 Are the climate and living conditions favorable?

Due to West Virginia's loca-

tion—midway between the North and South—and its average high elevation, the seasons are extremely mild. In most industrial areas you'll find adequate housing—and in all communities, a cordial and a cooperative attitude toward industrial enterprises.

5 What are the recreational facilities in West Virginia?

West Virginia's State Parks and Forests are nationally known for rustic beauty, wholesome sport and invigorating recreation. Wild game is abundant . . . fishing is excellent! In most communities, civic, musical, drama and art organizations are popular.

6 What are the leading manufacturing industries in West Virginia?

These varied industries include huge chemical plants producing Nylon, chlorines, ammonia, bromines, salts, and other compounds and derivatives; companies producing glass (an industry in which West Virginia ranks second); coke and steel producers and allied industries; manufacturers of fluorescent lighting equipment, plastics, synthetic rubber, textiles, etc.

You are cordially invited to write on your business letterhead for complete and detailed information concerning West Virginia resources, plant sites and industrial opportunities. Any specific data you require relative to definite localities will be promptly furnished upon request.



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are tightening up. Dealers in turn pay an average of 2½¢ apiece for old records, which they use like ration coupons to buy new stocks. Neighborhood shops frequently take in an average of 100 a week, but department stores receive practically none, and this puts them at a disadvantage in securing new records. Collections are supplemented by service organizations, like the Boy Scouts and the American Women's Voluntary Services (BW-Mar. 28 '42, p52), and a thriving black market.

• **Low Cost Labels Out**—Rising costs are reflected in the higher proportion of 50¢ labels that are sold as compared with the 35¢ recordings. Records are under price ceilings, and OPA has shown no inclination to grant relief; so manufacturers have relieved the squeeze a bit by making only a few token releases in the lowest-price bracket.

Another shift in production is concentration on popular records. Makers won't waste precious shellac on anything less than a sure seller. Thus Victor pressed only 100 separate titles for Christmas this year, and Columbia has cut releases to 20 popular numbers.

• **No Point in Circumvention**—Attempts to give the public up-to-the-minute tunes since Aug. 1 have been unrewarding. To get around the Petrillo ban, the transcribed radio shows that feature late-night programs on many stations went in for recordings by instruments not covered in union contracts—harmonicas, ocarinas, one-man bands. But such programs had no more appeal for advertisers than preban music.

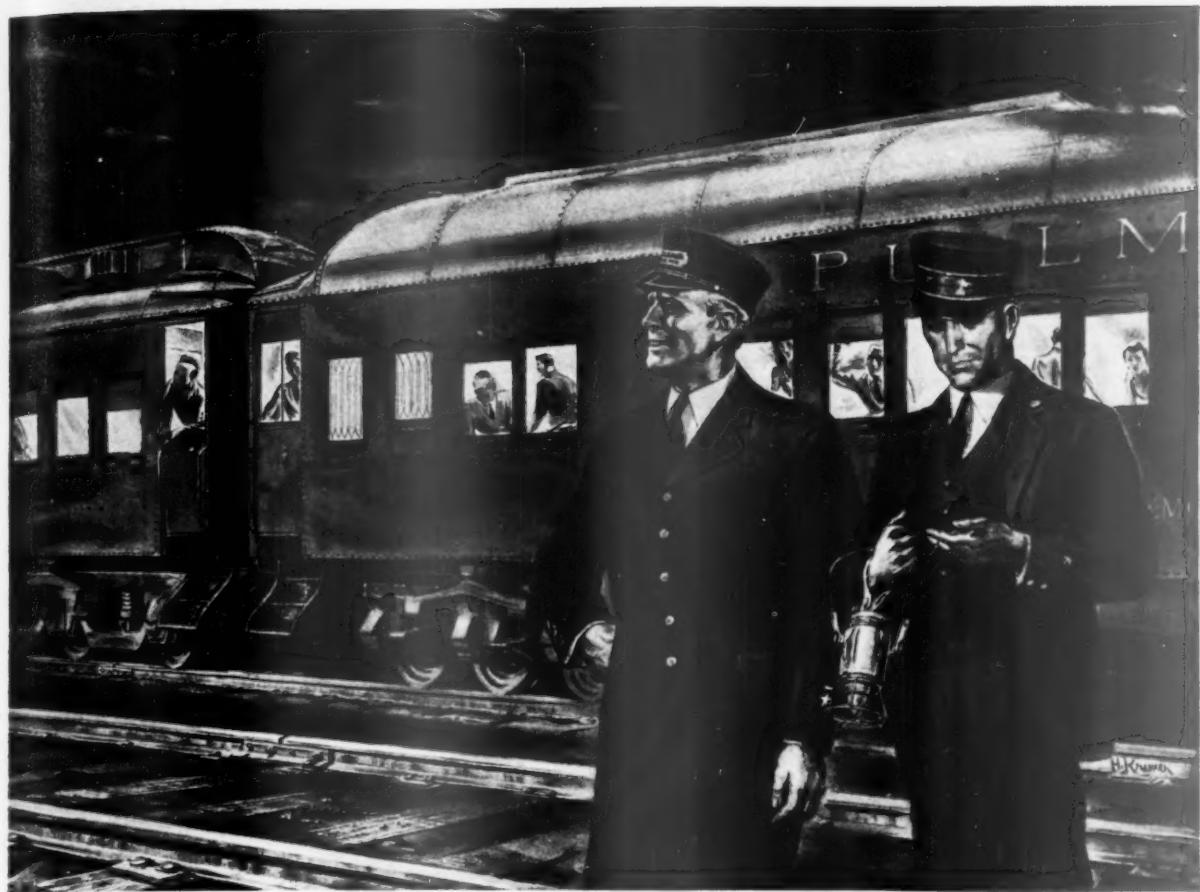
TRUCK PARTS "BANK"

An "Emergency Truck Parts Bank," which seems to offer a partial answer to the hard-pressed truck operator's maintenance problem, has been set up by the A. Pasteris Co., Oakland, Calif.

The company is calling on truckers to take parts from the broken-down trucks that they have in dead storage and send them to the "bank" at 2200 Wood St., Oakland. The parts are then steam-cleaned and appraised. The trucker is offered a price which he can accept or reject. If he accepts, the firm buys the part and the trucker gets cash or credit on a future take-out.

Typical transaction last week, described by W. P. Scott, general manager of the A. Pasteris Co. and former president of the Truck Owners Assn. of California: A trucker offered enough parts from two of his abandoned trucks to get a missing part for one of his vehicles, which was then placed back in operation.

One of the biggest sources of parts, according to Mr. Scott, is the trucker who started operations with a particular make of truck, collected a supply of parts for it, and later switched to another make.



Copy. 1943, The Pullman Co.

When standing still means *full speed ahead*

YOUR CRACK PASSENGER TRAIN stands on a siding while a heavy freight or troop train rumbles by. Men, munitions and material . . . full speed ahead for war.

*And the slight delay in your train
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"We'll keep 'em rolling!" say the railroads. And what a magnificent job of it they're doing! Pullman knows, better than most, because Pullman works shoulder-to-shoulder with more than one hundred different railroads, though it is actually a part of none.

From this unique position, Pullman can give you an accurate, impartial, "eye-witness" account of the amazingly efficient

manner in which these roads are carrying out their wartime duties.

For example:

Daily deliveries of oil by rail to Eastern states are now 65 times as great as they were before Axis submarines started to sink tankers.

Latest figures on coal shipments to New England are 60 per cent greater than those for a year ago. There is a 30 per cent increase in ton-mile freight service.

And total passenger traffic is more than doubled!

That's where we come in. And the way

the railroads—all of them—are handling Pullman sleeping cars is right in keeping with the splendid record they are making in every phase of wartime transportation.

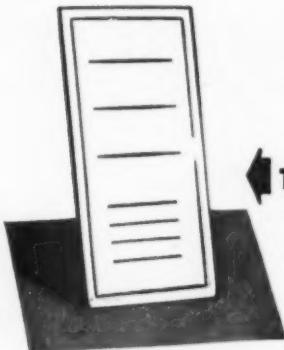
Each Pullman car—on the average—now operates at an all-time high in number of passengers carried and, thanks to faster handling, in miles traveled per day.

Yes, Pullman's hat is off to the railroads. Yours should be, too. They'll keep 'em rolling—we'll sleep 'em rolling. That's our wartime job!

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GO PULLMAN





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SICK WORKERS
BACK TO THEIR JOBS
BUT...



IT'S A MORALE BOOSTER
THAT'S HARD TO BEAT!

FOR DETAILS, WRITE



THE WAR—AND BUSINESS ABROAD

Nazi Nightmare

Russians' new successes not only are vital in strategic sense, but also deprive Reich of natural resources.

Germany is losing the war in Russia and is abandoning Italian Libya to the British Eighth Army. The Axis is either in retreat or on the defensive in all but one phase of World War II—U-boats are still a match for the shipbuilder. Although details of current ship losses cannot be published, the present rate of sinkings continued through 1943 would cost us 10% of our steel output.

In Russia, the wide-fronted Red army drive toward Rostov has placed the entire 1942 German gain in the Caucasus in jeopardy. The collapse of resistance along the Grozny-Armavir railroad signals a desperate German effort to bolster defenses, while the new Soviet drive west from the Voronezh area, like the several drives originating northwest of Stalingrad, is successfully diverting German attempts to rush northern troops to Rostov. Only weeks after smuggling winter stores into besieged Leningrad, the Russians have blasted German defenses at Schlüsselburg, freeing one of the Leningrad-Moscow railroads.

Strengthened Middle East

Coupled with the widening Soviet offensives, Iraq's declaration of war against the Axis strengthens the Allied position in the Middle East, which, only a year ago, looked like a feeble bastion against a German-Japanese junction in southern Asia (BW—Mar. 14 '42, p34). Not only the United Nations' supply lines to Russia are now more secure, but also the bartering position of the Allies in Turkey is enhanced by the new diplomatic and military position.

Behind the second successful winter offensive is Russian husbanding of manpower and matériel, but more important has been the preservation of Soviet industrial potential despite sacrifices of territory and the loss of cities, power sources, raw materials, and immovable plants.

Expansion of Ural and Asiatic industries, continuing the decentralization program begun ten years ago, has been speeded by the transfer of machinery and skilled workers from Voroshilovgrad, Voronezh, Rostov, and other manufacturing centers. That heavy as well as light industry moved eastward ahead of the German advance is clear from the recent statement of the Deputy Com-

RAILWAYS RETAKEN

Soviet Transport Eased
by Winter Victories



missar of Iron and Steel Industries that his mills "now produce every type of steel required by the war industries and are fully meeting demands."

During the last year Soviet planners abandoned the "short leap" policy of industry evacuation which, in 1941, landed Ukrainian and western Russian industries smack in the middle of the 1942 Volga battleground. At the expense of longer railroad hauls, plants were transferred to the Ural region.

Of equal importance has been Russian capacity to eliminate unessential uses of materials needed by war industry. Production of railroad equipment, for instance, has apparently ceased completely as a result of the removal of rolling stock from the lost territories.

Boon to Transportation

First effects of the current Soviet offensive—which has reclaimed 60,000 of the 150,000 square miles lost to the Germans in 1942—will be felt by the advancing Red army itself. Just as German spearheads slashed at key communication lines, so the Russian drives are now freeing the railroads which must feed a continuing offensive. Critical rail junctions again in Soviet hands, but requiring rehabilitation before they can be used extensively, include Mineralnaya Vody (on the Rostov-Grozny line), Kotelnikov, Sverovo, Novo Sokolnika (west of Velikiye Luki), and Schlüsselburg. The Voronezh thrust has freed the double-track line to Kamensk which originates in the north at Moscow.

Augmented Fuel Supply

Crossing the Donets River at Kamensk, the Russian army is now advancing into the rich coal-producing area of the Donbas. If Russian iron and steel output has been adequate to keep munitions factories at capacity production, that capacity has often been seriously limited by available supplies of coal. Ural factories have been more adequately supplied since the opening of a railroad linking the Karaganda coal field with Magnitogorsk—less than half as far away as the Kuzbas mines—but other industrial centers have been less fortunate.

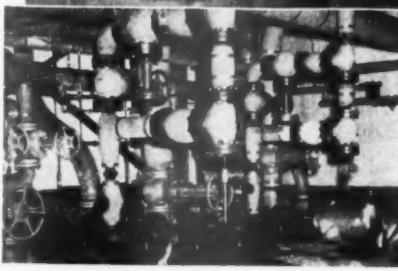
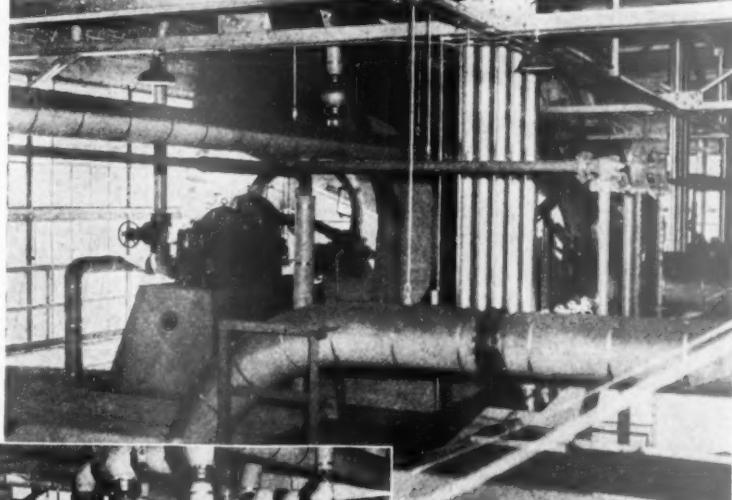
Although the Soviets recaptured the coal fields south of Moscow last winter, and many of the mines around Tula report an output greater than in 1941, all this coal is reserved for factories in the Moscow area. The capital city itself—and most other Russian cities—will be heated this winter with wood. But if Russia holds the Donets area, by early summer the mines should again be supplying coal to Russian industry.

Oil Output Holds Up Well

In the Caucasus, German troops have abandoned the salient that threatened the Grozny oil field. Despite the loss of 700 wells at Maikop and removal of

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You may find a solution to this problem in what other war plants are doing now. They are moving materials handling to the "air lanes"—to the ceiling with Louden Monorail and Overhead Cranes... getting handling out of the way of production, uncovering urgently needed floor space, enabling operators to work with greater ease and speed, accelerating the handling of materials and products from receiving room to shipping platform... and releasing men from handling jobs for absorption into production jobs.

Louden... the pioneer, universally used overhead handling equipment... meets any need, handles anything from 10 pounds to 10 tons. Doubled plant capacity permits unusually prompt delivery on many items. What is your materials handling problem? Come to Louden for a solution. Write or wire TODAY. The Louden Machinery Company, 524 E. Superior Ave., Fairfield, Iowa.



Steps Up Any Plant's Output

Provides additional production space, time and labor economies. Electric hoists on traveling cranes, cab-operated motor-driven crane hoists, etc., etc., permit wide range of handling over one universal system.

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64 pages, facts, pictures showing man-, time-, and space-saving methods. Write today.



LOUDEN OVERHEAD MATERIAL HANDLING SYSTEMS

Untangle Men, Machines, Manufacturing and Material Handling

drilling and refining equipment from Grozny, total Soviet oil production has not declined during the war. Output of wells outside the Baku region in 1942, according to an official statement, increased 40% over 1941. At the same time, Baku production increased as a result of greater wartime efficiency, new drillings, and the addition of equipment retrieved from the abandoned Maikop oil field and from lend-lease shipments.

Chief difficulties arose from congestion of transportation facilities in the Caspian region. In peacetime, 35% of Baku oil was shipped to the Caspian end of the Rostov pipeline (at Makhach Kala) and up the Volga to Stalingrad, Saratov, and Syzran. The new railroad through Astrakhan and north to Saratov helped to move part of this essential fuel last summer. During 1942 a second pipeline from the northeast Caspian port of Guriev carried much of the oil usually shipped on the Volga. With the northern part of the Caspian now icebound, the Baku oil must be sent to the recently improved port of Krasnovodsk 150 miles away on the east shore. From there the railroad to Tashkent is being doubletracked.

Nazis' Manpower Problem

As a Russian winter comeback enters the third month, the world awaits an Axis answer. Reports from Turkey indicate that as many as 42 divisions may have been withdrawn from the Russian front since the Allies launched the African campaign. These forces must now return to battle if their "departure" was ever more than a German alibi. According to Russian reports less than 50,000 troops remain of the 20 divisions trapped in the Stalingrad pocket. Sizeable German losses may be expected to continue as long as the Russian armies move westward.

This toll of German manpower is serious now because it can no longer be fully replaced, either by the shifting or depletion of occupation forces or by the further drafting of workers from Axis skill-shy industry. Nevertheless, the German position in Russia is not hopeless as long as the series of strongpoints, popularly described as "the East Wall," remains in their rear.

The significance of the Russian offensive for American business men lies in (1) the fact that Russia is mauling and wearing down German strength, thereby shortening the prospective duration of the war; (2) the scale of the Russian offensive, which by freeing communication lines, raw material sources, and safeguarding external supply routes means that the Soviets will continue to be a decisive military factor; and therefore (3) that the American war effort will continue to be closely geared to the task of producing supplies for the Russian front.



"Everybody talks about the weather . . .

... but nobody does anything about it." No longer is this famous old quotation true. For Boeing engineers *have* done something about it!

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inside the Stratoliner is maintained at a level at which passengers and crew are comfortable. That's why the Stratoliner represents the greatest advance yet reached in the design and manufacture of commercial airplanes . . . and a guidepost to the future of flight.

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another Boeing-designed and Boeing-built airplane—the Flying Fortress.* For the engineering and manufacturing lessons learned in building the Stratoliner and the Fortress are today being applied to creating still better military planes.

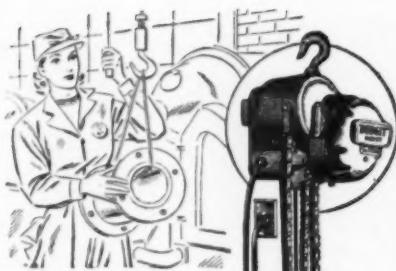
The engineering and production know-how acquired by Boeing in many fields—structural, electrical, metallurgical, aerodynamic and many others—this know-how will some day be converted . . . from making America victorious, to making the fruits of science and industry available to free men everywhere.

Engineering leadership . . . manufacturing efficiency . . . now and tomorrow, these are implicit in the phrase "Built by Boeing."

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'Budgit' Hoists are portable, electric hoists with lifting capacities of 250, 500, 1000 and 2000 lbs. They are priced from \$119 up. Hang up, plug in, and use. For complete information, write for Bulletin 348.



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Available in various types, designs and styles to meet different pressure and service requirements... the result of 32 years' specialization in this field. Ask for Catalog C-10 and tell us about your measuring problems so that we may write you fully. THE MERIAM CO., 1999 W 112 St., Cleveland, O.

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—THE INSTRUMENT PEOPLE

Behind the War Headlines

Japan's Shipping

Discount numerical tabulations of Japanese ship losses—watch for tonnage totals. Gravity of Japan's shipping shortage is doubtful: Toll is being taken of ocean-going heavy-tonnage merchantmen and transports, but the bulk of Japan's merchant fleet is smaller vessels. Average launching tonnage of Japanese ships (1917-38) was 2,417 tons. We're now building (and losing) ships that average over 11,000 tons.

A recent bag of eleven Japanese ships in the Pacific meant a net loss of only 50,000 tons; a similar toll of United States ships would have cost us more than 140,000 tons. Japan is using more and more small vessels because of their quick turnaround and ability to navigate shallow coastal waters and interisland channels. Most sinkings in the South Pacific are of these small vessels, though their tonnage is not given in official communiques.

German Transport

Add to Germany's problems arising from deteriorating railroad equipment another contributed by Nature. Low water levels in rivers and canals forced Swedish iron ore shipments from barge to railroads a few months ago, and other traffic previously shifted from rail to river had to be returned to railroads.

A locomotive-building program, designed to add 6,000 to 7,000 new all-purpose engines to the Reichsbahnen, is under way although this goal is not expected to be achieved in 1943. Polish railway shops are being worked to capacity, and additional rolling stock is being removed from occupied territories. Italian trains occasionally are detained in Germany—allegedly for lack of fuel to return them—actually to make emergency runs in Austria.

Turkish-Soviet Trade

Improving diplomatic relations between Russia and Turkey, broken over the attempted assassination of Von Papen in 1941, portend renewed trade between these countries, although negotiations are still under the hat.

Advantages to the United Nations' war effort likely to follow a Turkish-Soviet get-together would arise from savings in ship tonnage on the long haul around Africa. For example, Turkey has important tonnages of

copper within stone's throw of the Soviet border, at Artvin. Chances are a trade deal would relieve the U. S. of copper tonnage ordered by the Soviets under lend-lease. Conceivably other materials needed by Russia's war plants could be supplied by Turkey to ease the pressure on United Nations' shipping.

India's War Weight

India's industrial potential looms small in comparison with that of most other United Nations but is unexpectedly large in one respect.

With a railroad locomotive output of only 10 to 15 a year, India has contributed more than 200 engines—converted to oil-burners—and 10,000 other railroad vehicles for export by shutting down 19 branch lines. In addition, 770 miles of rail have been torn up and 800 miles of rail withdrawn from government stocks for export. Indian mills produced about 800 miles of new rails in 1942 and more than 300 miles of new lines were laid in India.

Broad and narrow-gage rail equipment has been of immeasurable value in the Middle East, especially to facilitate movement of lend-lease goods across Iran to the Caspian for shipment to Russia. This contribution from India has lightened burdens on American industry.

Roll Out the Barrels

Puerto Rican rum exports have run above \$6,000,000 in one year (1940), and export taxes have been an important source of the island's revenue in the past. A bottle shortage, which combined with lack of shipping space to reduce both exports and income, may soon be ended by shipments of knocked-down barrels from the U. S. to move accumulated stocks.

Canadian Spuds

A New Brunswick dehydration plant now has the capacity to produce enough dry potatoes to serve 1,325,000 soldiers weekly. Total output of the Hartland plant of New Brunswick Potato Products, Ltd., has been contracted for by the Dominion Agricultural Supply Board for use of the armed forces.

Preliminary schedules call for weekly production of 2,000 to 3,000 15-lb. cans of dry potatoes. Two cans packed in a carton are equivalent to 465 lbs. of potatoes and will serve 1,060.

MARKETING

Retail Paradox

Mercantile poverty in the midst of plenty sets the pitch for 1943. If sales remain healthy, inventories must suffer.

Instinctively, every merchant knows that 1943 is going to be tough. The round of winter trade association meetings now in progress is evoking jeremiads about mercantile poverty in the midst of financial plenty almost as much as the meetings of 1932-33 complained about the reverse.

• **Sales Hit 56 Billion**—Last year was the biggest in retailing history. Sales amounted to a walloping \$56,000,000,000, outstripping 1941 by 3%, 1939 by 33%, 1929 by 14%. In 1943, sales may still come to within 13% of 1942 levels (in dollars), but only at the painful cost of inventory depletion.

On paper, this phenomenon of depletion isn't readily apparent. Seemingly, the drops in estimated sales and estimated production (see tables) just about balance each other out, thus obviating the necessity to dig into precious shelf-stocks. But this cheery picture is purely a statistical mirage.

• **Includes Capital Goods**—“Civilian” production includes large quantities of capital goods—railroad and transportation equipment, store fixtures, etc.—which cannot be sold over a retail counter. If civilian production is deflated by the amount of such nonretail goods, it is readily apparent that new supplies will lag behind retail sales.

The size of this lag has been estimated all the way from 10% to as high

SIGNALS FOR '43

Type of Business	Sales * Outlook	New Supplies Outlook
Food Store	Good	Spotty, but fair; more rationing coming
Eating-Drinking Establishment	Very bright	Fair
Apparel Store	Dubious	Dubious
Filling Station	Bad	Rationed
Building Material- Hardware	Bad	Very bad
House Furnishing Store	Dubious	Spotty; dubious
Automotive Store	Bad	Bad
Drug Store	Fair to good	Spotty; fair
General Merchandise Store	Dubious	Very spotty
Nondurable Goods Stores (as a class)	Fair to good	Spotty; but fair
Durable Goods Stores (as a class)	Dubious to bad	Bad

* To some extent the sales outlook is governed by the availability of supplies and size of inventories. A bad sales outlook need not necessarily imply a refusal to buy on the part of customers.

FIND YOUR MAN FASTER!

VITAL WAR PRODUCTION CAN'T WAIT!



“Cartwright, there must be some quicker way to locate Jones!”

IT wasn't a sprinting secretary that located 650 individuals in 8 hours in a large aircraft plant recently! It was Operadio *voice-paging*—the quickest way to “locate Jones,” give orders, get information—literally *in a flash!*

Records show that 95% of those paging calls were answered within 60 seconds!

Check that against your own paging records. There just isn't *anything else* to compare with *voice* paging, which in a single factory is credited with a saving of 4,000 man-hours per month.

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The Outlook for Civilian Supply

Index in production based on value added by manufacture
(1935-1939 equals 100)

	1941	1942	1943	1942-1943
				% Change
Autos, Bodies, Parts, Accessories	126	18	0
Nonferrous Metals and Products	111	66	50	-24
Lumber	90	36	25	-31
Furniture	138	112	63	-44
Stone, Clay, Glass Products	137	117	110	-6
Cotton Consumption	134	120	112	-7
Rayon Deliveries	161	151	124	-18
Woolen and Worsted Products	122	46	48	+4
Shoes	117	109	81	-26
Manufactured Food Products	122	125	114	-9
Manufactured Dairy Products	125	128	127	-1
Meat Packing	116	117	114	-3
Alcoholic Beverages	116	125	114	-9
Tobacco Products	116	114	109	-4
Paper and Paper Products	128	111	72	-36
Petroleum and Coal Products	115	73	68	-7
Gasoline Production	113	66	58	-12
Coke Production	110	33	17	-48
Chemicals	118	85	61	-28
Bituminous Coal	107	78	69	-12
Anthracite Coal	107	115	120	+4
Crude Petroleum	108	101	94	-7
Metals	89	53	37	-31
All Durable Goods *	141	68	47	-31
All Nondurable Goods	123	99	83	-16
Total Civilian Production	128	81	70	-14

Adapted from Federal Reserve Board and Dept. of Commerce data.

* This category includes items that are not consumer goods.

as 25%. Fortunately, current inventories are sizable (aggregating a seven to eight months' supply in the combined hands of manufacturers, wholesalers, and storekeepers). A 10% depletion may not mean much trouble. But a 25% depletion would be skirting the rim of disaster. Hence, retailers in 1943 continually may be flirting with death through inventory starvation.

● **Slow Movers**—Furthermore, the currently high aggregate inventories include many items—like autos, tires, furs—that move but slowly, do not benefit, say, a hardware or furniture man. And, the possible fact that department stores in the East are loaded with apparel is of no benefit to the Montana general store down to its last suit of overalls.

As a matter of fact, the disparity of inventory and sales between big and little stores is considerable. This is evident from the following table:*

Class of store by annual volume	Sales: Inventories:	
	1st half of 1942	June 30, 1942 vs. 1st half of 1941 June 30, 1941
Over \$100,000	+14%	+22%
\$50,000 to \$99,999	+17	+14
\$30,000 to \$49,999	+14	+12
\$20,000 to \$29,999	+15	+8
\$10,000 to \$19,999	+16	+11
Less than \$10,000	+20	+12

* Adapted from a compilation by Dun and Bradstreet, Inc., for the Wholesale and Retail Inventory Policy Committee of WPB. The figures are a composite for 15 trades, not including motor vehicle dealers. Size-of-store classifications have been arrived at here by doubling sales for the first six months into an approximate annual total.

● **End of the Rope?**—This table plainly suggests that many a small retailer may

unevenly distributed, estimated sales for 1943 show a jerky gait. The dollar volume of sales in the first half of the year is expected to drop only 5% from 1942. But in the second half, the decline will be 15%.

Of course, to some extent shortages will be compensated by price increases. It seems doubtful, however, that OPA would compensate the expected 44% drop in furniture production with sufficient price increases to make up the deficit. More, only a really big merchant can ever take full advantage of a price increase. The small fellow, who lives a hand-to-mouth existence so far as supplies are concerned, usually has to pass some of his increase back to the supplier. All he keeps is his normal margin (unless OPA, as sometimes happens in its food decisions, gives the little fellow a bigger margin to outbid the chain store on the wholesale-manufacturer market).

● **Can Wait for Rise**—By and large, the big merchant is more capable of hoarding inventories until the retail price has risen sufficiently to make old goods, purchased at old wholesale prices, appreciate considerably. Therefore, 1943 will may see selective withholding of inventories among big stores, dire depletion among the little ones.

As against sales, retail operating expenses are sure to rise. Corporate taxes already have jumped (at full rates) from 31% to 40%. Now manpower is becoming a bigger and bigger problem. To some extent, retail wages are causing the loss of choice personnel. In October, retail wages averaged \$23.36 per week (up 5.8% from the year before), while factory wages stood at \$38.86 (up 25% from the year before).

● **Fields to Watch**—How many stores will get a knockout punch from these tribulations is hard to say. Significant places to expect wartime casualties are in the apparel, filling station, building material, hardware, house furnishing, and general merchandise fields. Conceivably a minimum of 460,000 retailers (out of a total of upwards of 1,800,000)

Estimated Retail Sales for 1943

(Billions of Dollars)

1941	1942			1943			1942-1943 % Change
	1st Half	2nd Half	Total	1st Half	2nd Half	Total	
Food Stores	12.4	7.2	15.1	7.6	7.4	15.0	-0.7
Eating & Drinking	4.6	2.6	5.8	3.5	3.7	7.2	+24.1
Apparel	4.1	2.2	2.8	5.0	2.3	2.0	-4.3
Filling Stations	3.5	1.6	1.7	3.3	1.3	1.3	-21.2
Building Material-Hardware	3.7	1.9	1.9	3.8	0.6	0.6	-68.5
House Furnishing	2.4	1.1	1.2	2.3	0.7	0.6	-1.3
Automotive Stores	8.2	1.6	1.4	3.0	1.2	1.0	-26.7
Drug	1.9	1.0	1.2	2.2	1.1	1.0	-4.5
General Merchandise	7.8	3.8	5.0	8.8	3.7	3.5	-18.2
Other Retail Stores	5.6	3.2	3.5	6.7	3.0	2.9	-11.9
Total Retail	54.2	26.3	29.9	56.2	25.0	24.0	49.0
Nondurable	39.3	21.5	24.9	46.4	22.4	21.7	44.1
Durable	14.9	4.8	5.0	9.8	2.6	2.3	4.9

Source: Dept. of Commerce.

ELEVATOR



**Why Managers of
Industry say:**

"PLAY SAFE" TO NEW WORKERS IN WAR PLANTS

DESPITE the great job done by plant managers in "selling" safety measures to workers, industrial accidents are increasing. There's a heavy task ahead.

New, untrained workers must be warned, for example, that overcrowding an elevator may cripple or kill. The elevator operator should play safe—should follow the rules at the right approved by the National Safety Council.

Thousands of busy elevators are suspended on our safe, dependable wire ropes: Tru-Lay Preformed, made by the American Cable Division; and Lay-Set Preformed, made by the Hazard Division. From our wealth of experience we are prepared to supply information on the proper care and maintenance of the cables on your elevators.

In addition to wire rope, we also build many other products for Industry, Transportation and Agriculture, essential in peace, vital in war.

NATIONAL SAFETY COUNCIL SUGGESTIONS FOR ELEVATOR OPERATION

1. Don't operate a damaged or overloaded elevator.
2. Before starting, block unstable objects, get everything in the clear with passengers facing door, close and latch door.
3. Before opening doors level elevator with floor and set control in neutral.
4. Stop elevator before reversing.
5. Before leaving elevator unattended—throw main switch or lock control cable—close doors or gates.
6. Don't permit unauthorized persons to operate elevator.



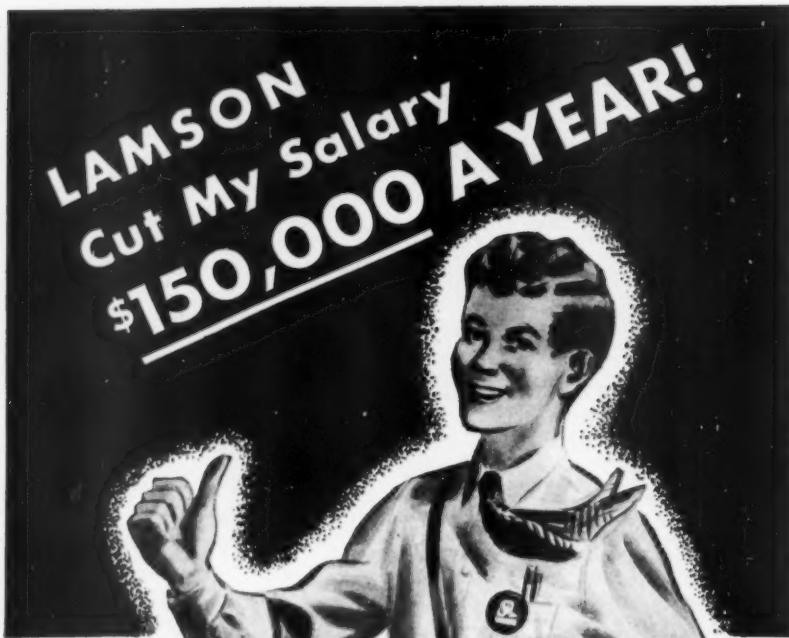
In Business for Your Safety

The American Chain & Cable Company is happy to cooperate with the National Safety Council in its nation-wide campaign to "Save Manpower for War-power"—which is now being conducted at the request of President Roosevelt.

AMERICAN CHAIN & CABLE COMPANY, Inc.

BRIDGEPORT, CONNECTICUT

In Canada—Dominion Chain Company, Ltd. • In England—The Parsons Chain Company, Ltd., and British Wire Products, Ltd. American Chain, American Cable Wire Rope and Aircraft Controls, Campbell Cutting Machines, Ford Chain Blocks, Hazard Wire Rope, Manley Garage Equipment, Owen Springs, Page Fence and Welding Wire, Reading Castings, Reading-Pratt & Cady Valves, Wright Hoists and Cranes



*—and I'm glad of it! You see, I represent the amount that Aircraft would have to pay out in Messenger Service around this huge new plant . . . I represent all those hours of foot-work we'd spend in running back and forth among the buildings often as much as a mile apart. And I represent all the wasted manpower that would result unless Lamson took over.

* With Lamson Dispatch Tubes, this factory has cut us all out—and it's saving at least \$150,000 a year! But I'm glad—because I've got a useful new production job on the assembly line with all the others!

* I'll say that Lamson "Messengers with Wings"—those fast pneumatic tubes—certainly speed up wartime output. With all the orders, job tickets, detail changes, plans, messages and inter-office paperwork rushed around by Lamson I'll bet the efficiency of our plant is a hundred per cent better!

* Why, Mister—those Lamson Pneumatic Tube Carriers are large enough to carry whole letter files without folding, blueprints over two feet long and parts, samples and tools that weigh 5 to 10 pounds.



is potentially affected. Meantime, normal deaths will continue without a complete offset through new births. Result is that at least 25% of the nation's stores are on extremely perilous footing.

Because the death of many small stores would raise havoc with the distribution system in rural areas, Washington has shown a few signs of being perturbed. Retailers themselves have not voiced any organized clamor over the coming adversity. Hence Washington is unwilling to administer any bitter medicine until the patient is sick enough not to care how distasteful the medicine is going to be.

• **Frills Dropped**—Sole Washington help thus far: permission to cut out frills and increase efficiency without revising ceiling prices downward (BW—Dec. 5 '42, p8). Insiders in the retail trade, however, know that such self-help is best suited to big stores (which are fat enough to stand reducing exercises), and that good advice seldom filters down among the small ones.



INDUSTRIAL CHIC

Fashion and utility are mated in welding hats (above) by Sally Victor, New York designer, for General Electric. They're flameproof, to be worn under welding helmets. In England, Sir Wilfred Garrett (H. M. Chief Inspector of Factories) also uses style bait in women workers' safety headgear.



Vanishing Era

Frontier of the big dry goods jobbers recedes to St. Louis as Chicago firm yields to Army space demands.

Sixty carloads of merchandise—the entire wholesale stock of Carson Pirie Scott & Co. except floor coverings—were being delivered this week from Chicago to the Ely Walker Dry Goods Co. at St. Louis. Thereby, at one stroke, the St. Louis firm obtained a sizable inventory and lost a major competitor.

• **Dry Goods Going West**—Long-term significance of this transaction is not the withdrawal of Carson Pirie to its retail store on State St., Chicago, but rather the surrender of the easternmost bastion of U. S. dry goods wholesaling.

Only 40 years ago every important middle western city—Minneapolis, Omaha, Kansas City, St. Louis—had from two to six big wholesale dry goods houses. Steadily these have been driven out of business as rural consumers abandoned the crossroads merchant for the county seat department store and chain store, until now there is no vestige of the old-line dry goods jobbers east of St. Louis.

• **How They Folded**—First of the big Chicago wholesalers to yield was John V. Farwell & Co. In 1926 its owners sold out to Carson's, exacting from the purchasers an onerous 20-year lease on the 750,000-sq. ft. Farwell building. In 1935 when James O. McKinsey was reorganizing Marshall Field & Co., he closed out Field's wholesale department.

Last month the government announced it had requisitioned Carson's wholesale building, would require immediate possession to house 5,000 War and Treasury employees who handle war bonds bought by Army personnel. Carson confirmed its withdrawal from wholesaling anything but floor coverings—which it has handled long and profitably more as a manufacturer's agent than as a jobber.

• **No Obstructionists**—General opinion in merchandising circles is that Carson's shrewd president, Frederick H. Scott, was glad to get out when his inventories could bring their real value in a seller's market. If Carson executives did not encourage the government to take over their high-rental lease, they most assuredly did nothing to sabotage the deal.

Chicago's wholesale dry goods market is now left to Butler Brothers—formerly all variety goods, now half variety and half dry goods with special emphasis on dealer help—and to the dozens of small specialty jobbers who can operate profitably on overhead far lower than the big houses.



KEEP IT FLYING

The flag of universal safety—the symbol of the safety consciousness of those who work under it—a recognition of the value of safety in the conservation of manpower so essential to war-time production.

Employers Mutual safety engineers omit no detail in the development of safety consciousness among the workers in plants of our policyholders. Result—accident prevention, uninterrupted production and compensation insurance cost-savings of note.

Perhaps you would appreciate the many benefits of this service in your plant. Ask for details.

Employers Mutual

LIABILITY INSURANCE COMPANY OF WISCONSIN
HOME OFFICE: WAUSAU, WISCONSIN

OFFICES IN THE PRINCIPAL CITIES OF THE UNITED STATES

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CORPORATE tax problems you face this year are probably the most confusing in history. For trustworthy interpretation and specific counsel as to what to do on returns, we are confident you will find here the best, the most usable guidance anywhere, for any company.

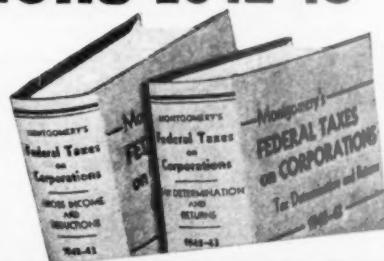
Gives you the net result of the statute and of the thousands of rulings and decisions bearing on it. In decisions you must make on income, excess profits, and other taxes, gives the supporting authority and recommendations you need.

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MAINE
DEVELOPMENT
COMMISSION

Coffee Stabilized

Although frailties of the distribution system may belie it, present imports are just about equal to consumption.

OPA may have its headaches with gasoline and fuel oil rations, but with coffee, demand can be calculated now that it is sold by coupon. Current imports just about equal current consumption—although shipments are more erratic. December's supply of a million bags was twice that of November and the highest since July. Total stocks remain about what they were when rationing began (BW—Nov. 28 '42, p14).

• **Distribution Falls Down**—But inadequacies of distribution keep consumers and retailers from realizing that the coffee books are balanced. Roasters who do not have a backlog haven't been able to fill quotas for coupons submitted by retailers and have returned many of them to the stores. To ease this, OPA is issuing an order extending the validity of these coupons (stamp number 27 would have expired at the wholesale level Jan. 13) until coffee is available.

Selling coffee under rationing is like going into a new line of business. Therefore, sales cannot be compared to pre-rationing conditions, and new trends won't be clearly defined until the end of the second ration period, if then.

• **Consumption Down 40%**—Grocers report, however, that consumers have not bought up to their quotas. Chains estimate that under rationing, consumption is 40% less than a year ago; OPA estimates 30%. Less-than-quota buying may be due to pantry hoarding.

High-priced coffees are selling in far greater proportion than ever before, trade sources report. Makers advertise that coffees of better quality can be stretched further. Those packed in glass enjoy greatest popularity at the end of the ration period because of a belief that they retain flavor better than paper-packed brands.

• **Shipping Space**—The real reason more high-priced coffee is being sold is that more is available. Low-priced brands use chiefly certain grades of Brazilian coffee, and there is less shipping space from that country than from the nearer Americas (principally Colombia) which supply us with high-priced coffees.

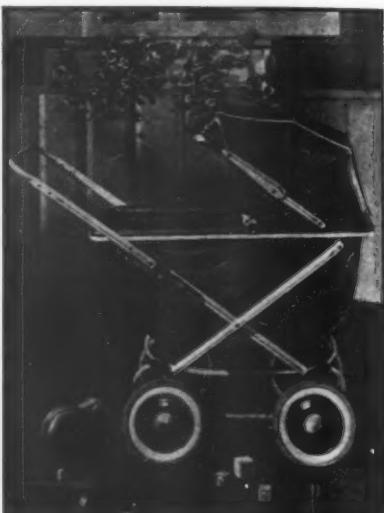
Of the 2,461,150 bags of coffee imported in the last quarter of 1942, only 37.3% (or 917,867 bags) was from Brazil, compared with 47.9% in the year ended Sept. 30, 1942. In the more normal preceding year, Brazil's quota was 58.7%.

• **Brands Still Important**—Retailers are almost as anxious to carry the customary variety of brands as they are to have an



SLUMBER LUMBER

Bed springs of resilient birchwood, and wooden baby buggies using less than 6 lb. of metal instead of the prewar 35, appeared at Chicago's American Furniture Mart show (BW—Jan. 9 '43, p14). Prices of the wooden-wheeled, ball-bearing buggies varied little from metal models.



adequate total supply, on the assumption that finicky consumers will do all their marketing at the store that carries their favorite brand.

Coffee-maker manufacturers, who feared loss of business at least proportionate to that of coffee itself, now find they cannot begin to fill demand, especially for small sizes. New York's R. H. Macy & Co. sold 400 of the two-cup size in one day, now has only replacement parts left.

• **Glass Boom**—Glass coffee-makers are enjoying the biggest boom because the pulverized coffee they require is supposed to stretch further.



Announcing the consolidation of

MICHIGAN ALKALI COMPANY
THE J. B. FORD COMPANY

into

WYANDOTTE CHEMICALS CORPORATION

Back in the 1890's, two companies were established in Wyandotte, Michigan, by Captain John B. Ford, father of the plate glass industry in America, and an outstanding pioneer in the chemical industry.

The Michigan Alkali Company grew to be one of the great basic chemical companies of the world, manufacturing a wide range of products serving more than fifty different industries.

The J. B. Ford Company developed into the world's largest manufacturer of specialized cleaning materials, and an important factor in promoting sanitation and safeguarding the health of America.

The company controls warehouse facilities strategically located at approximately 200 points throughout the country.

Consolidation a Logical Step

On January 1, 1943, these companies were consolidated, still under the

same family ownership, to form the Wyandotte Chemicals Corporation.

This consolidation is a logical recognition of the close relationship which has existed between the companies for many years.

Management and personnel will remain the same, but the consolidation will offer an opportunity for even greater service to our customers.

Many Benefits to Customers

Wyandotte Chemicals Corporation will continue to have one of the best distribution systems in the United States—making all Wyandotte products more readily available, to smaller as well as larger consumers.

Combining the technical staffs of the two companies will now make it possible to bring a wider range of expert technical service to Michigan Alkali and The J. B. Ford customers everywhere.

The enlarged research laboratories may be counted upon to develop

important new products to meet the needs of war and post-war conditions.

And by the complete integration of the ownership of raw material sources and control of manufacturing and distribution *in the one company*, Wyandotte Chemicals Corporation will be able still further to enhance the *quality and value* for which Wyandotte products have long been noted.

Contracts and commitments of Michigan Alkali Company and The J. B. Ford Company in force at the end of the year 1942 will be carried out without interruption by the Wyandotte Chemicals Corporation, and customer contacts will be maintained without interruption by the Michigan Alkali Division and the J. B. Ford Division of the consolidated sales departments.

It is our sincere intention to continue to develop and manufacture to the best of our ability products which help the nation in wartime and which will contribute to a fuller life when peace is won.

WYANDOTTE CHEMICALS CORPORATION

Michigan Alkali and J. B. Ford Divisions

Wyandotte, Michigan

When fliers take to boats they use a deep-drawn cylinder



This cylinder is only one of many and varied Hackney deep-drawn shapes now in active war service. Not only does deep drawing assure an improved product, but it also effects considerable savings in material, man-hours and equipment.

Fliers forced down at sea use a deep-drawn cylinder to inflate rubberized boats which keep them afloat until rescued. The inflation is accomplished by compressed carbon dioxide stored in the deep-drawn lightweight cylinders.

Here, as in countless other war products, the Hackney deep-drawn process has met the requirements necessary to produce the unit to aviation specifications and meet war urgencies. In common with other parts used by aircraft, this cylinder must be light in weight. Hitherto, it was necessary to machine the cylinder

down to specifications. Time is saved. Material is conserved—and considerable lathe equipment and needed machinists are released for other work.

The Hackney deep-drawn process assures uniform side-wall thickness. Electrically controlled heat-treating provides additional strength.

Perhaps your product can use the time- and material-saving advantages of the Hackney Deep-Drawn Process. Hackney engineers have had extensive experience in meeting war requirements for concerns in many industries. They are ready to help you. Write today for full details.

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DEEP-DRAWN
SHAPES AND SHELLS



WAR BUSINESS CHECKLIST

A digest of new federal regulations affecting priorities, price control, and transportation.

Hogs

Individual sellers' ceiling prices on dressed hogs have been replaced by a uniform method of determining maximum prices. Under the old system, each slaughterer applied to the live-hog price a multiplier which was determined by his average percentage markup in the period Feb. 7-Mar. 9, 1942. However, considerable inequities were caused by use of this method, since packers with a large and steady business during the base period tended to have fairly low multipliers, while others with less frequent base-period sales were permitted to use the multiplier based on these few unusually high-priced sales. The new regulation establishes specific multipliers for all sellers. (Amendment 1 to Revised Regulation 143.)

Coffee and Chicory

A coffee manufacturer who saves money by using paper or cardboard containers, instead of metal or glass, must pass the saving on to consumers under one of two alternative methods set up by OPA. He may either subtract the direct cost of the old container and add that of the new container, or reduce his ceiling price by a flat $2\frac{1}{2}$ ¢ a lb. (Amendment 85 to Supplementary Regulation 14.)

Manufacturers of chicory may not pack any more of the product in consumer size packages in 1943 than they did in 1941. Purpose of the order is to insure that the greater part of the nation's chicory production will continue to be sold in bulk form to coffee packagers. (Food Distribution Order 5.)

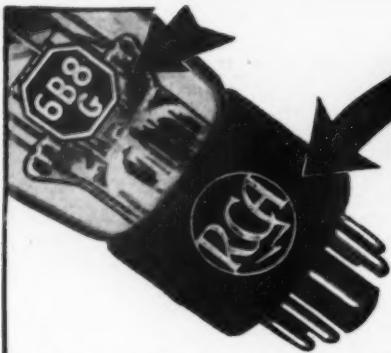
Dealers who blend coffee with coffee substitutes must report monthly to OPA the weight of blending compounds used and the total weight of blended coffee sold. (Amendment 6 to Ration Order 12.)

Kerosene Shipments

In an emergency move to ease the East Coast oil shortage, the Defense Supplies Corp. has announced that it will absorb all extraordinary costs of shipping kerosene into the North Atlantic Coast states caused by packing it in steel drums and shipping it in boxcars. The Army has made about 200,000 steel drums available, and shipments are expected to reach 6,500 bbl. a day.

Bicycle Rationing

Eligibility rules for the purchase of bicycles have been eased in the eastern gasoline shortage area, effective Feb. 1. Anyone in this area who is gainfully employed or is doing voluntary work essential to the war program or to public welfare may obtain a bicycle ration certificate if he needs one in his work or in traveling to or from work. Two other liberalizing provisions, effec-



How did that
get there?

Model RA put it there. In 1-1/5 seconds!
And on 2999 other RCA Radiotron bases
within the hour!

See how the clear, sharp durable lines match the clarity of hand engraving. Lasting legibility from the RCA monogram to the end of the type-of-tube identification. Years from now, because of the long, satisfying service it gave him, some consumer will want to replace this tube. He'll wipe the grease and dust away and this whole impression will re-appear as clean-cut and easy to read as it is today.

Markem markings assure repeat business from satisfied users. Does your future enjoy this protection?

Why not ask us about marking methods for your products? Whatever the size, shape or substance, we have a method and the machine to mark it quickly, legibly, lastingly and economically.

Marking of parts for war-work production is especially important. It speeds assemblies. Stops mistakes.

Catalog B1 on request

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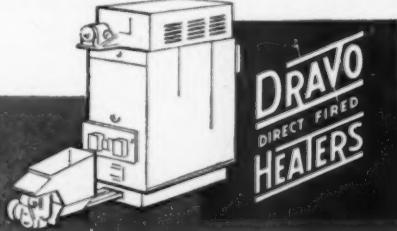
how to use economical direct fired heating where coal is the available fuel

IC heating industrial plants by means of direct fired warm air heaters fired with gas or oil has long been an accepted, economical practice. Now coal fired models are available for automatic bin or hopper feed stokers, hard or soft coal, in capacities of 1,000,000 to 4,000,000 B.t.u. per hour output.

War-time savings—in critical metals—labor hours of installation and maintenance—in fuel and its transportation are so important as to demand thorough investigation.

Those considering conversion to coal heat or new building to be heated with coal are welcome to copies of Dravo booklets 505 and 506.

DRAVO CORPORATION • *Dravo Building, Pittsburgh, Pa.*



for each "animal unit," except that any extension of more than 5,000 ft. must get specific WPB approval. (Supplementary Order P-46-c.)

Canned Soup

WPB has increased the number of cans available for packing soups in 1943, increasing the expected pack from 15,000,000 to 19,200,000 cases. The number of cans allowed for seasonal soups, such as tomato, asparagus, or pea soup, is unlimited. Packers are allowed 75% of the number of cans they used in 1942 for nonseasonal soups. (Order M-81, as amended.)

Collapsible Tubes

The amount of tin in toothpaste and shaving cream tubes in 1943 has been sharply reduced from 1942 use by WPB. Use of tin in shaving cream tubes is prohibited, and in toothpaste tubes is limited to 3% as compared with 5% previously. During 1943, manufacturers may not pack more than 75% of the amount of toothpaste they packed in 1942. Manufacture and use of all-tin tubes used by druggists to fill prescriptions, previously permitted, is now prohibited. (Order M-115, as amended.)

Other Priority Actions

Only specified sizes of bags may be used to pack foods, chemicals, seeds, and other listed products under the terms of Order M-221, as amended. . . . Order L-221, as amended, directs that purchase orders for electric motors and generators may not be accepted by manufacturers or dealers unless they bear ratings of AA-5, or higher. . . . Order M-200, as amended, increases the amount of iron and steel available for the manufacture of milk cans by about 75%.

. . . Manufacturers' inventories of pails, buckets, and wash tubs are frozen by Order L-30-a, as amended. . . . Employers who need rubber boots or work shoes for use by employees doing work essential to the war effort, public health, or safety during disasters are eligible for rationing certificates under the terms of Amendment 8 to Ration Order 6.

Other Price Actions

Adjustments in scrap iron and steel prices which widen the spread between prepared and unprepared scrap, and thus encourage preparation before shipment, are provided in Amendment 10 to Revised Schedule 4. . . . OPA has set up specific dollar-and-cents ceilings for magnesium scrap and remelt magnesium ingot, which were recently ordered to be segregated by WPB. . . . The price regulations governing primary lead, and scrap lead and secondary lead (Revised Schedules 69 and 70), have been rewritten to make their terms simpler and more definite. . . . Order 125 under Regulation 188 provides that paint manufacturers may substitute boiled linseed oil for some of the linseed oil used in ready mixed exterior oil paints without reducing their prices. . . . A method by which new retail groceries can compute their markups for 13 food groups is embodied in Amendment 8 to Regulation 238. . . . Regulations 300 and 301 set up ceilings on rubber drug sundries at all distribution levels.

PRODUCTION

Infrared Finish

Use of drying process is widening; military vehicles in Midwest plant get baked finish from 1,000-kw. load.

One of the largest single installations since infrared drying became an industrial tool is being readied this week for immediate operation. At an undisclosed plant in the Midwest more than 1,000 kw. of connected infrared load will be used to bake finish on military vehicles. For comparison, Willys-Overland uses about 300 kw. in a 185-ft. conveyor tunnel for baking enamel on its jeep frames and chassis.

• **Ford Development**—Infrared drying was developed and patented by Ford Motor Co. in the early 30's and is manufactured and sold by other companies licensed royalty-free under these patents. Ford had, at the time automobile manufacture ceased, a total of about 25,000 kw. The total connected load of all other users is estimated to be about 75,000 kw.

Only since 1940 has a substantial volume of infrared reflectors been produced and installed. The two largest manufacturers in this field are Fostoria Pressed Steel Corp. and C. M. Hall Lamp Co. The infrared lamps themselves are made principally by General Electric, Westinghouse, North Ameri-



SHIP'S CAT

Speeding production of Victory ships are Caterpillar's 98-hp. diesel tractors and 16-wheeled trailers, capable of handling massive prefabricated ship sections. The combinations can handle up to 100 tons.



How far can a pea roll?

FROM the fertile valleys of the Pacific Northwest to cities on the Eastern seaboard is a distance of over 3,000 miles. That's how far a pea can roll—when Northern Pacific Railway gives it a start!

Last year, carload after carload of peas—fresh, fresh-frozen, dried and canned—rolled to market in Northern Pacific cars . . . from Washington, Oregon, Idaho and Montana. Many of these peas were grown from Washington and Montana seed peas distributed by canneries to farmers along Northern Pacific tracks.

This year, thousands of additional acres of peas will be planted in our territory—peas that will roll swiftly to our armed forces, civilians and Allies over the "Main Street of the Northwest"!



"MAIN STREET OF THE NORTHWEST"

CAST YOUR CASH UPON THE WATERS

in the form of War Bonds,
and it shall return to
you many fold!



Ourselves? We're plenty busy on war orders now for Uncle Sam and his millions of nephews in the armed forces. They come first—but when this thing is over, we'll get back into "civvies" again and resume the job we've been doing for 66 years—building rolling and overhead doors in steel and wood. Maybe your War Bond money can buy some of them, too!

The  **WILSON** *Corporation*
370 Lexington Avenue, New York City
ESTABLISHED 1878

BUILDERS OF ROLLING AND OVERHEAD DOORS IN STEEL AND WOOD

A \$1,000 WAR BOND PAYS FOR:

NOW

Enough fuel
oil to run a
destroyer
2,000 miles
200 life rings
12 sets of
signal flags
for a
torpedo boat
Five depth
bombs

AFTER THE WAR

That speed!
boat you've
always wanted
A beautiful
ring for
your wife
A new wing on
your house
New furniture

**KEEP BUYING
WAR BONDS!**

Destroyers and Mosquito Boats pack a sting that's deadly to the enemy. More of them are being built every day, to cover our sea lanes all over the globe. That takes money—and **that takes WAR BONDS!** But you'll cash in on your bonds when the war is won. Then you'll want to build things and buy things and do things, and you'll be able to—with the money from your **WAR BONDS!**

Carriers are floating hives full of deadly "wasps" that put our enemies to flight. These floating islands, or "flat tops" as the Navy men call them, are tremendously intricate. To build them and their cargoes of planes takes a fortune, but the money comes from **WAR BONDS!** And the more **WAR BONDS** you buy, the bigger the "fortune" you'll have after the war to buy the things you want!

can Electric Lamp Co., Birdseye, and Fostoria Pressed Steel Corp.

• **Four Classes**—Thus far, infrared heat applications fall into four major classes: baking, dehydration, drying, and pre-heating. Probably 80% of the total work now being performed by infrared is in drying and baking paints and finishes. But engineers working believe that when war priorities cease to channel infrared service into finish jobs, other types of applications will so increase in importance that paint-baking will shrink in relative importance to around 25%, while food, rubber, textile, printing, plastic, and service industries take most of the rest.

An infrared lamp is made to generate energy waves that fall in that portion of the infrared band of the spectrum adjacent to the visible rays—technically described as wavelengths of 6,500 to 30,000 angstrom units. These waves produce lots of heat, very little light. When properly directed by reflectors, they heat the surface and subsurface of the work by radiation, as distinct from conduction and convection.

• **Convection Drawback**—Until the advent of infrared, most drying was by air convection, either through air at room temperature or through heated air in an oven or tunnel. Drawback of convective drying is that the surface of the paint first forms a tough sealing skin through which the vapors of the solvents beneath must pass off.

Infrared rays penetrate soft, wet paint and heat the surface beneath. Thereupon the solvent vaporizes, and the wet paint dries from the inside out. Rule of thumb, subject to many exceptions, is that infrared does most drying jobs in about 25% of the time required for convective drying. Time savings up to 90% have been attained with dark surfaces on metal.

• **Statistical Data Rare**—Because the infrared art is so new, statistics are few. Almost every projected application still needs a laboratory test, followed by specialized engineering. Typical laboratory equipment includes a spray booth, a flexible double bank of lamps and reflectors, a reversible conveyor, and an assortment of testing instruments.

The usual industrial application involves three other major influences besides the infrared frames, reflectors, and lamps. The enamel formula is critical, with urea-formaldehyde synthetics in high favor and oil-vehicle paints considered nearly impossible. The spray or dip equipment is important because some types leave films that are easier to dry than others. The conveyor that moves the work past the infrared source must be well adapted to the task. The very shape of the piece may be important.

• **Close Tolerances Possible**—An interesting application is the preheating of metal pieces to permit fitting to close



1853



1898

90 YEARS OF FAITH

in the American System

BN 1853 a young man, believing in the sound principles of the American Free Enterprise System, started making wagons and carriages. Adhering to these principles, his business grew. He incorporated in 1888.

With unlimited faith in the American System, this growing Cleveland Company began the manufacture of electric vehicles in 1898. In 1901, the Baker Electric Torpedo startled the world with a record speed of 104 miles per hour. This same year, Baker built the first shaft-drive automobile. In 1911 Baker contributed the worm-gear drive. In 1917, foreseeing our great industrial development, Baker went into the business of making industrial power trucks. Thousands of these trucks are today speeding production and the handling of material all over the world. A second Baker plant

builds commercial truck bodies to meet the specific requirements of public utilities.

Today we are at war. Along with other American industries, The Baker-Raulang Company has enlisted for the duration. Both plants are engaged 100% in war production. At the same time we are looking forward to playing our part in the rebuilding of peacetime industry, as we have done three times before in our history.

After 90 years—during which we survived more than a dozen major depressions, we still have faith in the System of Free Enterprise which has built the world's greatest nation—a nation capable of saving the world from despotism, through industry. We trust in the common sense of the American Public to justify our 90 years of faith—to keep America free for the rebuilding job in the critical years ahead.

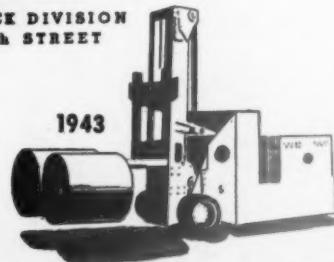
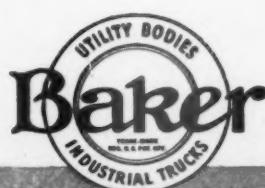
THE BAKER-RAULANG COMPANY

UTILITY BODY DIVISION
1280 WEST 80th STREET



1943

INDUSTRIAL TRUCK DIVISION
2168 WEST 25th STREET



1943

**CUTS TIME
ON MANY OPERATIONS
50% TO 80%!**



**Revolutionary
New PORTER-CABLE
WET-BELT
SURFACER!**

This new machining method is boosting output, smashing bottlenecks, taking over many operations from work-jammed millers, shapers, grinders, and lathes . . . and easing the minds of thousands of hard-pressed management men. In famous aircraft plants . . . in precision instrument shops and toolrooms . . . and in scores of production-line armament factories . . . this versatile tool has achieved astounding economies in time and labor.

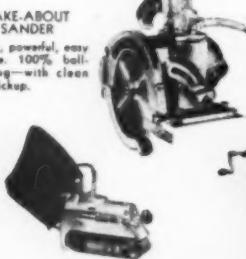
Its fast-cutting, diamond-hard abrasive belt—traveling at high speed—produces true, uniform, highly-polished surfaces, either flat or curved, to limits of .0005" if desired. Works either free-hand or with simplest fixtures on metals, plastics, compositions—no operator experience needed. And the Wet-Belt eliminates hazards of heating, discoloring, warping, dust. Investigate this new Porter-Cable G-8 Surfacer. See the many applications which will save time and effort and speed your production.

SEND NOW for a free copy of our new booklet showing many ways Porter-Cable Wet-Belt Surfers get results on war production jobs.

**Porter-Cable Machines that do Hard Jobs
the Quick, Easy Way . . .**

**TAKE-ABOUT
SANDER**

Sturdy, powerful, easy to use, 100% ball-bearing—with clean dust pickup.



**UNIVERSAL MILLING MACHINE
ATTACHMENT**

Adds to operations done on power and hand-feed millers; reduces set-ups.

**SPEEDMATIC
SAW**

Helical-gear drive for efficient, smooth power and long-life. Perfect balance for one-hand operation.



**CHAIN-DRIVE
7" SHAPER**

Precision—ease of operation—high cutting speed, no vibration.



DISC SANDER

Direct-drive, ball-bearing motor. Table tilts, lowers.

**SPEEDMATIC
FLOOR SANDERS**

Fast, clean, powerful. Unusual handling ease.



tolerances. At one Westinghouse plant, for example, aluminum motor frames are heated to 302 deg. F. This increases the 6 1/2-in. bore by 0.02 in., permitting the primary coil to be dropped into place. A rotary conveyor carries the frames through a 56-reflector tunnel at 36 ft. per min.

Dehydration of thread is one of the prize applications thus far developed, but the industry sees big opportunities ahead in removing moisture also from leather, paper, wood, ceramics, and foods. Infrared food dehydration is largely in the experimental stage, but one manufacturer of compressed dehydrated coffee reports the use of infrared so successful that his product stays fresh for months without protective packaging.

• **Some Advantages**—Principal advantages claimed by infrared makers over older drying processes are: (1) speed, (2) instant availability without standby loss, (3) visible operation, (4) uniform quality, (5) flexibility of equipment to a variety of products, (6) safety because no high temperatures are created in the adjacent space, (7) space saving, and (8) lower investment.

Boxed Juice?

Vitamin-preserving plan for dehydrating citrus fruits without flavor loss portends distribution shake-up.

An announcement soon will be made by the California Foods Research Institute, San Francisco, that a successful method of producing powdered orange juice without use of heat and with only 2% vitamin loss is ready for commercial development.

• **Flavor Retention Claimed**—Researchers in the field always have known that use of heat in the dehydration process results in vitamin losses, usually in direct ratio to the amount of heat applied. It also affects flavor of the "reconstituted" juice. Spokesmen for the institute insist their product "tastes exactly like fresh orange juice."

If utilized commercially the process might become one of the biggest citrus development's in recent years, according to L. B. Williams, head of the institute. Food brokers and jobbers without produce-company affiliates long have eyed enviously the tremendous volume of oranges that flows in channels not open to them (California orange volume alone runs around \$100,000,000 annually).

• **Could Induce Shake-up**—Largely due to this, canned orange juice had been pushed to high levels prior to restrictions in use of tin. If a powdered orange juice is developed that, when "reconstituted," retains fresh juice flavor, it might easily start an industry shake-up.

PORTER-CABLE
MACHINE CO.

2030-2 N. Salina St.,
Syracuse, N. Y.

Precision Machinery Builders Since 1906

Fuels Simplified

S. A. E. gets glimpse of postwar world in which oils, gasolines, and greases are standardized—and cheaper.

The war has brought marked changes to petroleum products. The only notable one for today's drivers is a minor diminution of octane ratings on gasoline. But for the armed services an important variety of improvements has developed which will give the postwar world better gasolines, oils, and greases—perhaps cheaper ones, too.

• **Standardization Under Way**—Significant among these changes is a widespread standardizing of products, which has been going on quietly since the war began, to produce multi-purpose petroleum derivatives and thereby simplify shipping problems. The first report on the scope of this program came last week at the Society of Automotive Engineers meeting at Detroit.

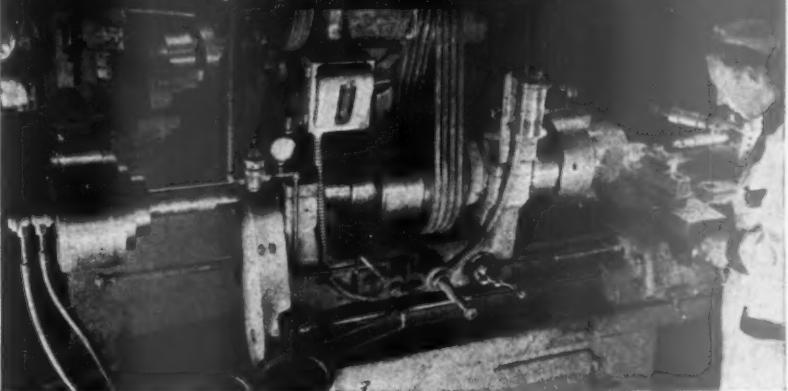
The armed services, reported Brig. Gen. Walter B. Pyron, are utilizing only four combat fuels—an 80-octane gasoline for tanks and trucks, 87- to 91-octane fuel for varied uses, 100-octane for aircraft, and standard diesel oil. The A and B types of 80-octane gasoline will soon be combined in a single fuel grade minimizing starting difficulties and stopping vapor lock.

• **Versatility Required**—Standardization of this sort sounds easy. But the same 80-octane gasoline that has to fight vapor lock in desert use also has to serve in Russia and Alaska; the operational



New president of the Society of Automotive Engineers is Mac Short, former Vega Aircraft Corp. president, now that concern's development head. He succeeds A. W. Herrington of Marmon-Herrington Co.

How to Make PRODUCTION EQUIPMENT of your old Lathes

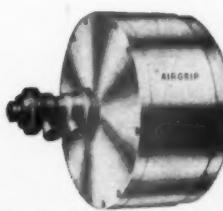


This World War I lathe, now fitted with an "Airgrip" air cylinder, is in a World War II mass production line.

Output Can Be Increased 25%, or More!

You can make production equipment out of your old lathes—increase their output more than 25%—by fitting them with Anker-Holth high speed revolving air cylinders and air-operated chucks.

And, you do not have to wait to take this progressive step, because most sizes of "Airgrip" air cylinders are available on reasonably prompt delivery.



Anker-Holth air cylinders step up production more than 25%.

When you check air cylinder requirements with us, also investigate Anker-Holth air operated universal three jaw chucks, collet chucks, expanding arbors, and shell holding equipment. They will help you do more work—at lower cost!

WRITE FOR BULLETIN!

Anker-Holth Mfg. Co.

"AIRGRIP" CHUCK DIVISION
332 So. MICHIGAN AVE. • CHICAGO, ILL.

CONSERVATION is DeLuxe's Field



EXAMPLE NO. 1

Conserving Oil and Engines in the Motor Transport Industry

The DeLuxe principles of oil cleansing found their first widespread adoption in the motor transport and delivery field. These men found, through test after test, that DeLuxe Filters made oil last its longest . . . reduced engine repair to new lows. Today, DeLuxe Filters are the most widely used in this field.

Because of these principles, the DeLuxe Oil Filter does more than strain oil . . . more than filter oil . . . it actually cleanses oil of asphaltenes before (not after) they can form into sludge and varnish.

Today these DeLuxe filtration principles have found wide application throughout industry and commerce. In addition, many manufacturers have included DeLuxe Filters as standard equipment on their products.

Engine users and manufacturers are receiving valuable help from our engineers. You, too, may have a problem requiring their help. If so, please write us immediately and, of course, without obligation. DeLuxe Products Corp., 1425 Lake Street, La Porte, Indiana.



Oil filters for all types of gasoline and diesel engines.



Also manufacturers of Light Weight Cast Iron Pistons: standard equipment with over forty manufacturers.

DELUXE FILTERS and PISTONS

THIS EXAMPLE
GIVES ME AN IDEA
DELUXE CAN HELP US
WITH OUR WAR-TIME
CONSERVATION
PROBLEMS

ARMY E NAVY

PRODUCTION FLAG WINNERS

Associated Spring Corp.
Detroit, Mich.
Blueridge Co., Inc.
Glasgow, Va.
Broad Brook Co.
Broad Brook, Conn.
Chicago Pneumatic Tool Co.
Cleveland, O.
Ciba Pharmaceutical
Products, Inc.
Summit, N. J.
E. I. du Pont de Nemours &
Co.
Deepwater Point, N. J.
A. B. Farquhar Co., Ltd.
York, Pa.
Fidelity Machine Co.
Philadelphia, Pa.
Fleetwings, Inc.
Bristol, Pa.
Hussman-Ligonier Co.
St. Louis, Mo.

Illinois Tool Works
Chicago, Ill.
C. O. Jelliff Mfg. Corp.
Southport, Conn.
Kelsey-Hayes Wheel Co.
(Three plants)
Martin Dyeing & Finishing
Co.
Bridgeport, N. J.
Michigan Maple Block Co.
Petoskey, Mich.
Mid-West Mfg. Co.
Galesburg, Ill.
The Pipe Machinery Co.
Cleveland, O.
Pratt & Letchworth Co., Inc.
Buffalo, N. Y.
Ripon Knitting Works
Ripon, Wis.
Simonds Saw & Steel Co.
(Two plants)

Specialty Mfg. Co.
Houston, Tex.
Stoner Mfg. Corp.
Aurora, Ill.
Texas Washer Co.
Houston, Tex.
Tools & Gages Inc.
Cleveland, O.
Triangle Package Machinery
Co.
Chicago, Ill.
Trailer Co. of America
Cincinnati, O.
Vermont Tap & Die Corp.
Lyndonville, Vt.
Vince Corp.
Detroit, Mich.
Wannamaker Chemical Co.
Orangeburg, S. C.
Wittek Mfg. Co.
Chicago, Ill.

(Earlier winners of the Army-Navy award for excellence in production will be found in previous issues of Business Week.)

ranges are from below zero to 120 F. Aircraft gasoline must get a plane off the ground, perhaps at 120 F., and operate it minutes later in substratosphere flight at minus 60 F. It's not an easy job for gasoline to do, but it's being done successfully.

Similar achievements hold true for axle grease, subjected since war began to rather radical changes in specifications to provide immediate acceleration.

• **Common Lubricant**—Lubricating oil has been standardized to the point where it can be used for small trucks, big tractors, or big tanks, powered by gas or diesel fuel. Ordinary mineral oil could not achieve this versatility, said Gen. Pyron, so chemical additive elements were introduced.

The need for standardization has had impacts on routine petroleum products. One manufacturer was said to have reduced four lubricating grades to one. Fuels, lubricants, and greases have been reduced by one-half to two-thirds. Therein lies the possibility of lower prices ahead; for if standardization proves satisfactory, simplified standards can be retained and costs will lighten all along the line.

• **Cold-Weather Lesson?** The Army is leading experimentation on cold-weather vehicle operation. It is safe to assume

that the lessons of vehicle winterizing will be translatable after the war into automotive fuels, oils, and greases that will start cars and trucks more easily on cold winter mornings and will move them with less strain on chilled inner parts.

While output of high-octane gasoline is enlarging to a point where auto engineers anticipate use of airplane-type fuel in postwar vehicles, today's research is establishing that engines operate satisfactorily on even lower quality gasolines than now prevail. Shell Oil engineers D. P. Brenz, H. H. Maxfield, and A. B. Culbertson reported no significant variance in fuel consumption by trucks as between 72- and 65-octane gasolines, while power output fell but 5%. Only spark-timing retardation was necessary to compensate for the change. And the effect of the reduction in octane to 71-72 from 75-76, which occurred in 1941, was said to be even less noticeable on passenger cars.

• **Altitude a Factor**—A paper by Donald D. Brooks of the National Bureau of Standards told of automobile engine experiments which established that an engine needing 70-octane gas at sea level needed fuel of only 30- to 35-octane rating at 8,000 ft. for equivalent performance.

What Has "Canvas Engineering" in Store for You?

After the war, when HOOPERWOOD Cotton Duck takes off its uniform and goes back to "business as usual" — here are some of the things you may expect.

Colorful awnings and canopies that carelessly-tossed cigarettes can't ignite, that weather and mildew won't rot and ruin prematurely — saving business and homeowners many thousands of dollars annually.

Tarpaulins and windbreaks used in building construction that can't be accidentally fired; a source of appalling destruction which now can be wiped out.

Canvas welding curtains from which white-hot sparks bounce off like rain. Fire-, water-, weather-, and mildew-resistant canvas lifeboat covers, hatch covers, life jackets, tarpaulins, etc., to lessen the fire hazard on shipboard.

Special canvas truck covers that will outlast their predecessors several times over. A canvas that repels gasoline and oil for aircraft services.

These and many other applications of HOOPERWOOD engineered fabrics for business and Industry will be waiting for you when our first obligation — our fighting forces — no longer need our entire production.

WM. E. HOOPER & SONS CO.
New York PHILADELPHIA Chicago
Mills: WOODBERRY, BALTIMORE, M.D.

Since 1800 (through six wars) the HOOPER name has symbolized highest quality in Cotton Duck and other Heavy Cotton Fabrics, Paper Mill Dryer Felts, Filter Cloth, Rope and Sash Cord.



HOOPERWOOD COTTON DUCK

• NEW PRODUCTS

Nonmetallic Fittings

Asbestos takes the place of critical metals in a new line of aircraft fittings developed by United States Rubber Co., Rockefeller Center, New York. They are formed from "Asbeston," an asbestos fabric considerably lighter in weight than the general run of such materials, and are calculated to withstand contin-



uous heat up to 350 F. and cold as low as minus 40 F. They are said to have marked advantages in sound deadening and resistance to vibration.

Fittings shown on the display board—carburetor air intake, heater hose nozzle, defroster attachment, gun blast boot, heat register, turbo cooling fitting, supercharger air connector—are only a few of the possible military and civilian applications envisioned by their developer. All were made from fabric like that in W. F. Spoerl's hands. Up to now three attachment procedures have been worked out: cementing; clamping over metal sleeves thrust into the openings; joining with "quick-grip" couplings.

SealTonic

To speed up the process of sealing packages with gummed paper tape and to make the tape stick more tightly by moistening it more thoroughly, Seal, Inc., Shelton, Conn., is bringing out SealTonic. It is a new liquid formulation to be added to the water in a tape dispensing machine. Its function is to accelerate the moistening action of water. Its cost is said to be less than half a cent for each 1,000 ft. of tape used.

Transparent Lunch Box

If all lunch boxes carried by war workers were as transparent as the new Victory Vu-Kit, they would not have to be opened for inspection at the war



*Cannoneers have
"extra" ears*

AS IMPORTANT as their manufacture, is the arrival *in good condition* of replacement and repair parts. Whether such material goes into storage or travels thousands of miles over land and sea, it must be packed in containers which meet Uncle Sam's specifications.

Co-operating with scores of manufacturers of war products, General

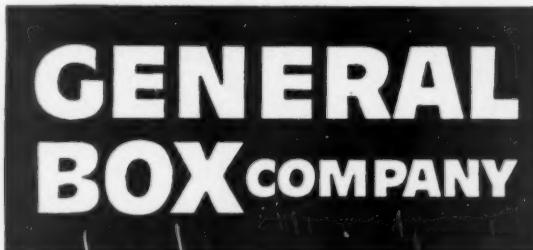
Box engineers have obtained wide experience and a thorough knowledge of the requirements for war products containers.

If you have a shipping container problem, General Box may be able to solve it quickly, may be able to help you determine which of the allowable alternates is most practical for your product. Write us.

For manufacturers of war products: General Heavy Duty Wire-Bound and Nailed Wooden BOXES and CRATES

For Domestic Service: Corrugated BOXES and Wood Cleated Fibreboard CRATES

Discontinued for the Duration: Generalite and Nailed Strapped BEVERAGE CASES



GENERAL OFFICES: 502 North Dearborn Street, Chicago, Illinois
DISTRICT OFFICES AND PLANTS: Brooklyn, Cincinnati, Detroit,
East St. Louis, Kansas City, Louisville, Milwaukee,
New Orleans, Sheboygan, Winchendon;
Continental Box Company, Inc.: Houston, Dallas.

plant gate. Time would be saved for production, and sound labor relations would be promoted.

The box is made of Lumarith plastic by V. W. Busch Mfg. Co., South Lyon, Mich. Although it is only 7½ in. high



and less than 10 in. long, it has room for a couple of man-sized sandwiches, a piece of pie or cake, fruit, and a pint thermal bottle.

Portable Coolant Pump

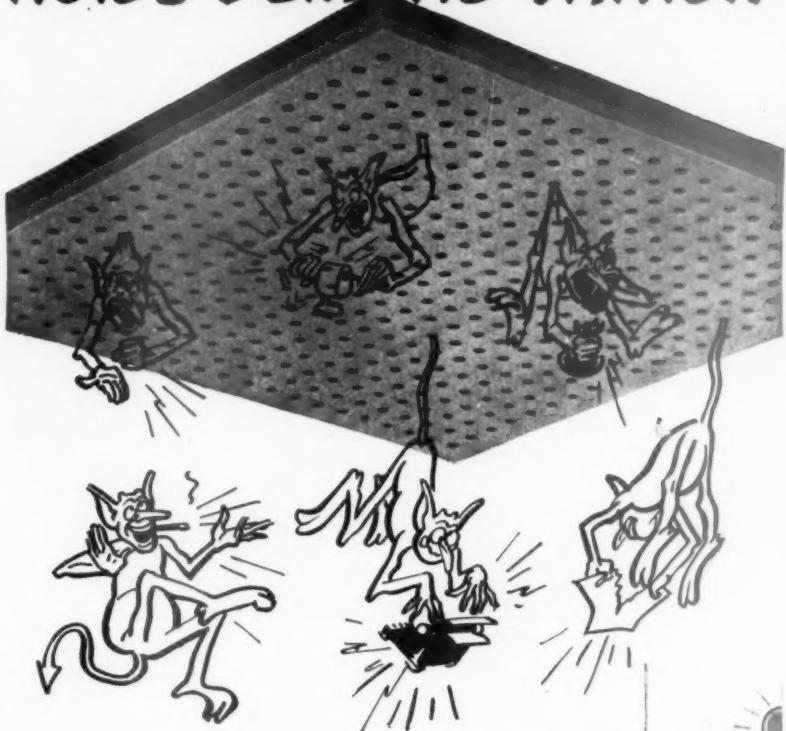
Newest portable coolant pump is the Atlas, manufactured by the Atlas Press Co., Kalamazoo, Mich. Though its tank is only 4½ in. deep to facilitate installation in machine shops where space is at a premium, it has a capacity of 5 gal. Its electrically powered centrifugal pump will deliver up to 7.5 gal. of soluble oil and water a minute, or up to 2.5 gal. of lard oil at 70 F., sufficient for the maxi-



mum flow requirements of most lathes, drill presses, millers, grinders, and other machine tools.

Pictured is the cooling setup for a Racine cut-off saw, with the pump arranged alongside for photographic purposes. Specially designed flow controls, flexible metal nozzles, drip pans, plastic feed and return tubing are all available as auxiliary equipment. The outfit also comes in a smaller size with approximately one half the delivery rate and tank capacity.

NOISE DEMONS VANISH



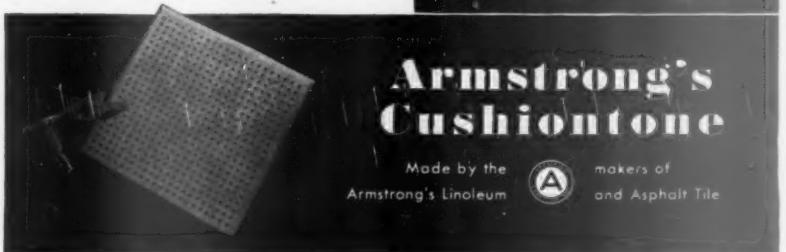
... Trapped in a ceiling of Armstrong's Cushion-tone

IT'S GOODBYE to noise demons and their efficiency-killing racket when your offices have new ceilings of Armstrong's Cushion-tone—the low-cost material that's repainting and permanently effective.

484 deep holes in each 12" x 12" unit literally trap disturbing din. Up to 75% of the sound that strikes a Cushion-tone ceiling never bounces back into the room.

Cushion-tone is installed quickly, with little interruption to business. It's easy to maintain. And its factory-applied, ivory-colored surface helps improve illumination.

LET US MAIL YOU a free copy of our new booklet which gives all the facts. Armstrong Cork Company, Building Materials Division, 3001 Stevens Street, Lancaster, Pa.





Protected by the policy back of the policy

YOUR Hardware Mutuals Compensation Insurance is noted for speed in paying for injuries to employees. But Hardware Mutuals *policy back of the policy* goes even further. It works unceasingly to prevent accidents, to reduce your costs, to keep production moving.

This *policy back of the policy* is our way of doing business which makes your interest the first consideration. Safety problems of *each plant* are studied individually. Every possible hazard is eliminated or minimized by safety engineering, education, plant safety organizations. Should an accident happen, our service is immediate, considerate and sympathetic; claims payments are swift, direct to your injured employee.

Thousands of policyholders testify that this *policy back of*

the policy is evident in all Hardware Mutuals insurance—Automobile, Fire and allied lines, Burglary, Plate Glass, General Liability, Compensation.

It stems straight from sound, efficient management—dealing direct with you through full-time representatives—careful selection of risks—and the return of resultant dividend savings to policyholders—more than \$76,000,000.00 to date. Current dividend saving on Compensation is 20%.

New nation-wide low rates on Automobile Liability now in effect... Licensed in every state... Offices in principal cities. All Hardware Mutuals policies are non-assessable.

FEDERATED HARDWARE MUTUALS
Hardware Dealers Mutual Fire Insurance Company, Home Office, Stevens Point, Wisconsin
Mutual Implement and Hardware Insurance Company, Home Office, Owatonna, Minnesota
HARDWARE MUTUAL CASUALTY COMPANY
Home Office, Stevens Point, Wisconsin



Hardware Mutuals

Stevens Point, Wis. * Owatonna, Minn.

Compensation, Automobile and other lines of

CASUALTY AND FIRE INSURANCE

LABOR

Unrest in Coal

Lewis emerges from his voluntary exile to warn of wage demands this spring for his coal miners.

Dramatic and important as was this week's news of the anthracite strike (page 14), it may prove of little consequence beside the news that bituminous coal labor is likely to make in the course of the next few months.

• **Soft Coal Walkout?**—This spring, John L. Lewis may find himself at the helm of another soft coal strike. If he does, it will eclipse even the historic union-shop deadlock in the captive mines (BW—Dec. 13 '41, p28) that resulted in the dissolution of the National Defense Mediation Board, the creation of the National War Labor Board—and a thumping victory for the United Mine Workers of America.

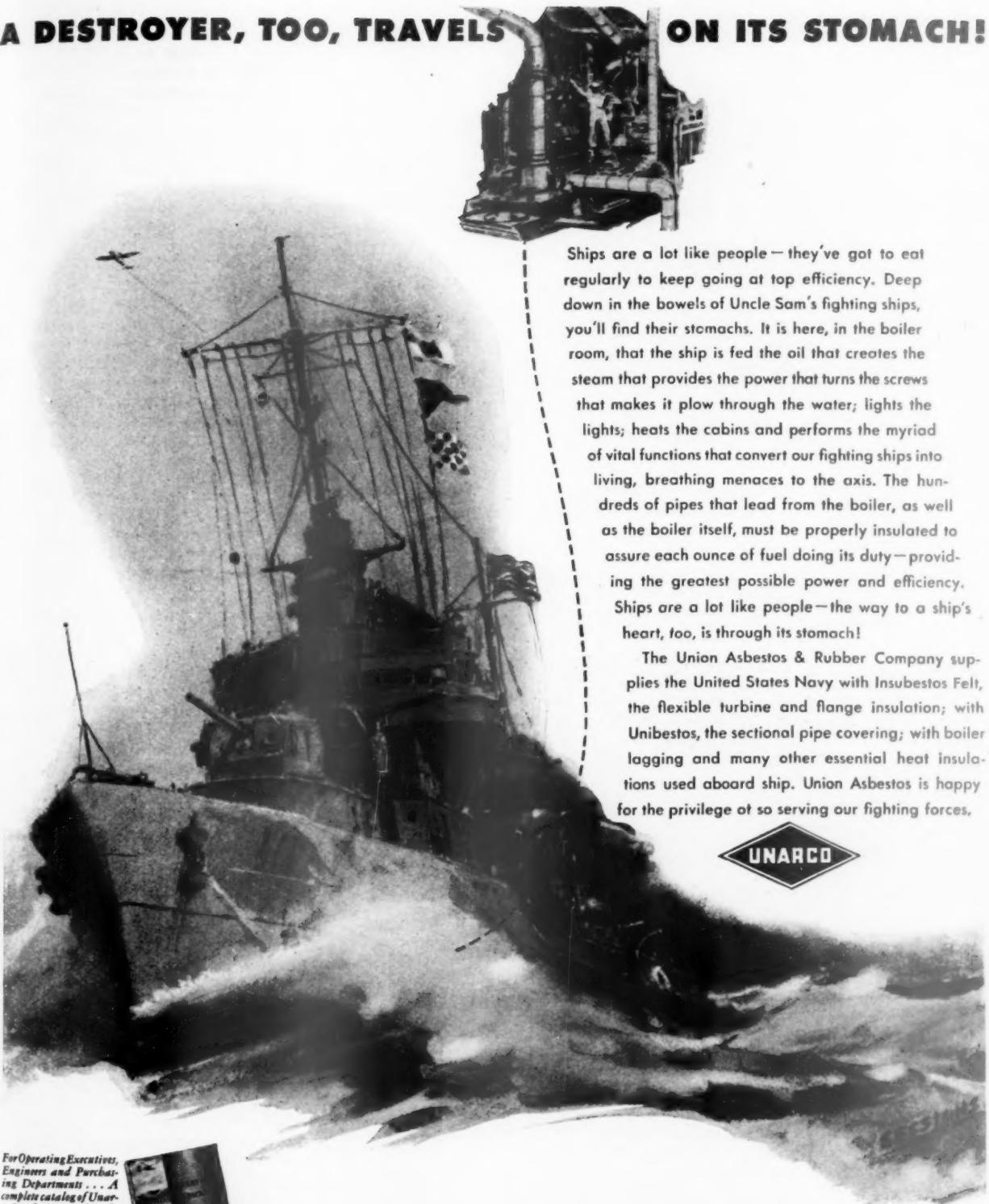
The U.M.W. president ended more than a year of self-imposed personal obscurity last week by appearing at N.W.L.B.'s anthracite strike hearing and assuming leadership of a campaign for "wholesome increases in wages." While everybody else was talking about the crisis in anthracite, it was clear that Lewis was talking about both hard and soft coal wages. And he was serving notice that, when coal contracts expire



PRISON PUSH

Wheels of prison shops are humming in tune with those of outside plants in the furtherance of the war effort. The sign in the Atlanta federal penitentiary tells why.

A DESTROYER, TOO, TRAVELS ON ITS STOMACH!



Ships are a lot like people—they've got to eat regularly to keep going at top efficiency. Deep down in the bowels of Uncle Sam's fighting ships, you'll find their stomachs. It is here, in the boiler room, that the ship is fed the oil that creates the steam that provides the power that turns the screws that make it plow through the water; lights the lights; heats the cabins and performs the myriad of vital functions that convert our fighting ships into living, breathing menaces to the axis. The hundreds of pipes that lead from the boiler, as well as the boiler itself, must be properly insulated to assure each ounce of fuel doing its duty—providing the greatest possible power and efficiency.

Ships are a lot like people—the way to a ship's heart, too, is through its stomach!

The Union Asbestos & Rubber Company supplies the United States Navy with Insubestos Felt, the flexible turbine and flange insulation; with Unibestos, the sectional pipe covering; with boiler lagging and many other essential heat insulations used aboard ship. Union Asbestos is happy for the privilege of serving our fighting forces.



For Operating Executives, Engineers and Purchasing Departments . . . A complete catalog of Unarco Insulations and Packings. When writing ask for Manual 48-969



For Engineers . . . A 72-page manual of insulation methods—application on Boilers, Induced Draft Fans and Ducts, Turbines and Stop Valves, Flanges and Fittings; Marine Boilers, Pumps, Fans, Engines and Turbines, etc. Ask for Manual 48-967.



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THE ARMY-NAVY "E" AWARDED TO THE PATERSON, N. J. PLANT FOR EXCELLENCE IN WAR PRODUCTION



WHAT'S MY BUSINESS?

It's not manufacturing. It's not construction work. After 23 years, I still have to explain this to people who don't know what we do.

Ours is a firm of consulting management engineers. We don't manufacture machinery, and we don't build buildings.

We do make business surveys for management, directors, bankers or investors to determine the earning possibilities of a company.

We help management in setting up its management program, policies, organization chart and manual.

We assist in devising and installing cost and budgetary controls, compensation plans, and executive reports.

We make market studies and recommend improvements in selling methods.

We assist in the installation or improvement of manufacturing methods, facilities, and organization.

We design and install production control, which includes inventory and material control, planning, scheduling, and dispatching the work.

We make job evaluation studies for factory and office occupations, and assist in their installation.

We advise in the design and development of products, and in the design and development of machinery and tools.

How did I get into this business? It happened in the last World War. I was then in a war production plant. And in that 1916-18 war production drive, I learned this basic fact—

"Labor is just as efficient as Management plans for it and provides tools with which to work."

With that as a premise, I started The Trundle Engineering Company as a consulting engineering firm. The firm grew. We now have offices in New York and Chicago, as well as Cleveland.

★ ★ ★

That is the business I am in. Or, I should say, that is the business our company is in—because I am now only one of over a hundred management engineers in the employ of The Trundle Engineering Company.



George R. Trundle, Jr.
President

THE TRUNDLE ENGINEERING COMPANY

Consulting Management Engineering

CHICAGO

CLEVELAND

NEW YORK

in April, the U.M.W. will make a determined demand for something like a \$2-a-day pay hike.

• **Course Charted**—Lewis already has set his union's policies on a course calculated to enhance his bargaining position in the coming showdown. Except in scattered coal fields, he has refused to sanction a longer work week. And nowhere has he cooperated in cutting absenteeism or raising production. He is aware that under wage stabilization rules a pay raise can be justified only on the grounds that it serves to correct inequities, raise substandard rates, or offset increased living costs.

His big talking point will be that the manpower mess in the industry can be straightened out only by piercing wage ceilings and giving the miners more money. If he supports any move for clearing up that mess now, he figures he will be in a weaker position when negotiations begin.

• **Labor Shortage Acute**—The critical nature of the manpower situation in coal is attested by the Army, whose labor experts say that it is the biggest non-agricultural industry where labor shortages are acute. It hasn't been long since coal was a "sick industry," burdened with unemployment. The swing to a grave manpower shortage has been one of the most complete revolutions resulting from the war. It has occurred because a combination of factors was present in the coal industry to a degree unmatched in any other mass-employment field. These factors include:

(1) **Lure of better jobs**—The war opened vast new employment opportunities to the coal miner, and he snapped at the bait dangled by the labor-hungry aircraft and shipbuilding companies, which were able to offer relief from the dirty, hazardous, strenuous labor of the mines, and higher weekly earnings.

(2) **Housing**—Accustomed to the drab, inadequate housing facilities of the coal patch, miners were not discouraged by the crowded conditions they found in urban war-factory areas as were some workers. One miner, living in a Detroit trailer camp, viewed his new environment as a big step toward the abundant life.

(3) **Transportation**—Increasing mine employment requires workers from more and more distant communities because pits seldom are located in populous areas. Inconvenient, uncomfortable, crowded transportation has made mine work even less appealing.

(4) **Apprenticeship**—It is difficult to attract new workers to the mines because of apprenticeship rules. Big coal states like Pennsylvania and West Virginia require a two-year apprenticeship before an employee gets a miner's certificate—and full pay. Ostensibly maintained for safety reasons, the two-year rule is supported by the U.M.W.; industry and government representatives

have asked the organization to join in appeals for its suspension during the emergency.

(5) **Absenteeism**—The War Manpower Commission attests that absenteeism is a major problem in coal. One big mine in the Appalachian district reports that in the first ten months of 1942 it lost seven shifts per man monthly. Except where individual mines have established labor-management production committees, the U.M.W. refuses to cooperate in a full effort to combat absenteeism.

(6) **Draft**—Selective Service has taken 50,000 miners, according to Solid Fuels Coordinator Harold L. Ickes. With the recent classification of coal as an essential industry, the drain of miners into the armed services has slowed.

• **Western Losses Heavy**—Migration of miners has been particularly heavy in the five western coal states (Utah, Colorado, Wyoming, New Mexico, Washington) mainly because they are near booming aircraft plants and shipyards. This has made a particularly troublesome problem because industry in that area has been geared to coal from those states.

Washington agrees with the mine operators that most of the industry's manpower problems could be solved with a 42-hour week. Under union contracts, miners now work five seven-hour days. Their short work-day derives from the tradition that their time begins when they begin to swing a pick underground, and their place of work may be an hour's trip from the pithead.

• **Extra Time Optional**—Except in the western states and Western Pennsylvania, Lewis has refused to sanction a sixth working day, even at time-and-a-half pay for the extra day.

Briefly, coal's manpower problem is a mess that every government procurement agency regards with concern. And there is a growing tendency to fix a large share of responsibility for it on Lewis.

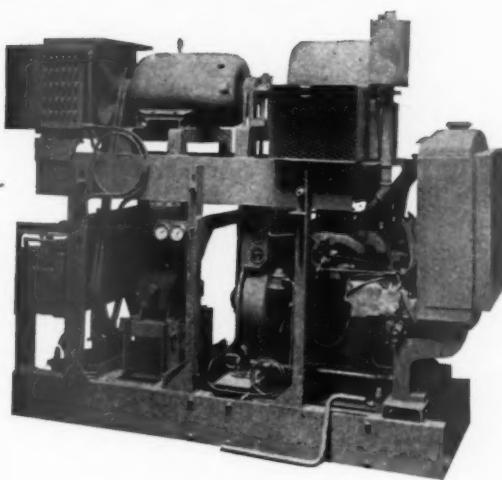
Rift in Chemicals

Showdown battle looms between C.I.O. and U.M.W. District 50, with chemical industry as the prize.

The Niagara Falls industrial area is destined to become the main battleground in the war between John L. Lewis and the C.I.O. for labor supremacy in the chemical industry—and possibly in the far-flung "lebensraum" that Lewis has staked out for his District 50, United Mine Workers of America.

• **Headquarters Set Up**—Such a prospect seemed inescapable this week as the C.I.O.'s United Gas, Coke & Chemical

PRODUCTION LINE



TO FIRING LINE



INTERNATIONAL NEWS PHOTO



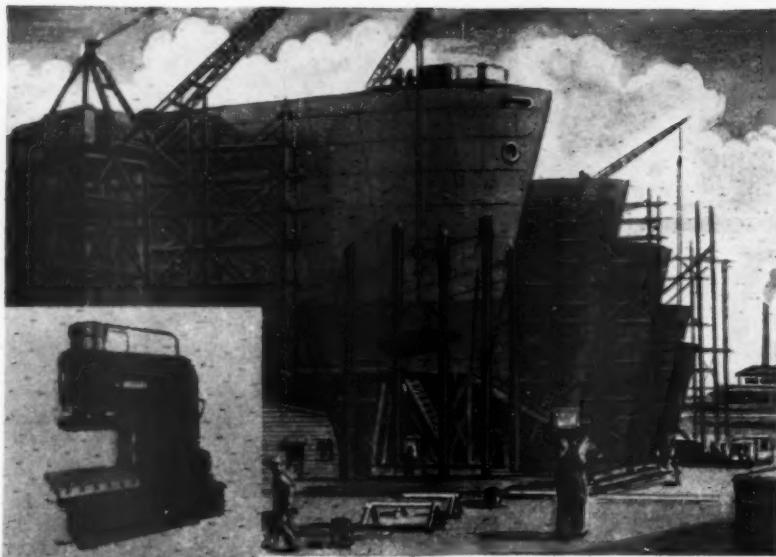
MEET Dick Cusick, USN! On the Universal Cooler production line he inspected refrigerating units. Then Pearl Harbor and he joined the Navy! And on the "firing line" more than 5,000 miles from home Dick caught up with his own inspection stamp on a Universal Cooler unit "in action" at the Army Engineers Base at Dutch Harbor, Alaska.

Cusick himself typifies how Universal Cooler men are serving from production line to firing line . . . and the refrigerating unit in question how Universal Cooler equipment is protecting vital food supplies for our armed forces from Alaska to advance African bases. And in addition, Universal Cooler's "orders of the day" call for hydraulic mechanisms for aiming turret guns on tanks, lubricating pumps for bombers, cooling equipment for machine guns . . . fast, precision production based on experience and equipment acquired during 20 years devoted exclusively to the design and manufacture of dependable, automatic refrigerating equipment

UNIVERSAL COOLER

UNIVERSAL COOLER CORPORATION • Automatic Refrigeration since 1922
MARION, OHIO • BRANTFORD, ONTARIO





75 TON GAP PRESS



200 TON JOGGING PRESS



100 TON BENDING PRESS



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Ships THAT GROW THROUGH THE NIGHT

AMERICA'S ability to produce the machines of war — almost overnight is truly the eighth wonder of the world. Those Victory ships that slide down the ways in ten to fifteen days are only one of the many examples of our ability to out-produce any other nation in the world.

Since the days of the old sailing ships a lot of changes have come about. It took longer to build a sailing vessel than it does to build a steel freighter — complete with all the modern methods of cargo handling and high speed on the seas.

Fast, accurate metal shaping equipment such as the scores of Farquhar hydraulic production presses which are at work in the nation's shipyards are making this speed possible. These presses take a sheet of flat steel, shape it in the time it takes to blink an eye into an essential part of the whole.

Farquhar builds hydraulic presses of all sizes and capacities for all kinds of metal working jobs—all designed for a purpose and built to serve through this war and the peace to come.

Farquhar

Since
1856

HYDRAULIC PRESSES
MATERIAL HANDLING EQUIPMENT
SPECIAL MACHINERY

A. B. FARQUHAR CO., Limited, York, Pennsylvania

Workers set up national headquarters in adjacent Buffalo, little more than an organizer's shout from the seven big chemical plants that constitute District 50's toehold in the industry.

Item 1 in the C.I.O.'s effort to wrest control of labor in these plants from Lewis comes up next week when the National Labor Relations Board opens hearings on petition of the U.G.C. &C.W. for an election at the Carbordum Co., key plant in the area.

- **Minor Victory**—Persuading NLRB to consider the petition was itself a minor triumph for the anti-Lewis forces. Shortly after Lewis took his union out of the C.I.O. last year, the board rejected similar petitions on the ground that existing contracts between District 50 and the chemical companies were a bar to proceedings at that time.

The C.I.O. chemical workers, led by Martin Wagner, president of District 50 before the split, apparently was able to convince the board that there has been a considerable shift in sympathies among the workers since Lewis bolted the C.I.O., big enough to warrant re-investigation. To head the Niagara Falls staff responsible for proving this, in the event NLRB orders elections, Wagner appointed Walter H. Harris, former hard-coal miner, who has been organizing shoe workers for C.I.O. in the Midwest.

- **U.M.W. Not Sleeping**—Lewis won't be caught napping. He has enlarged his staff at the Falls to build a powerful organization in the chemical plants and thwart the C.I.O. maneuver.

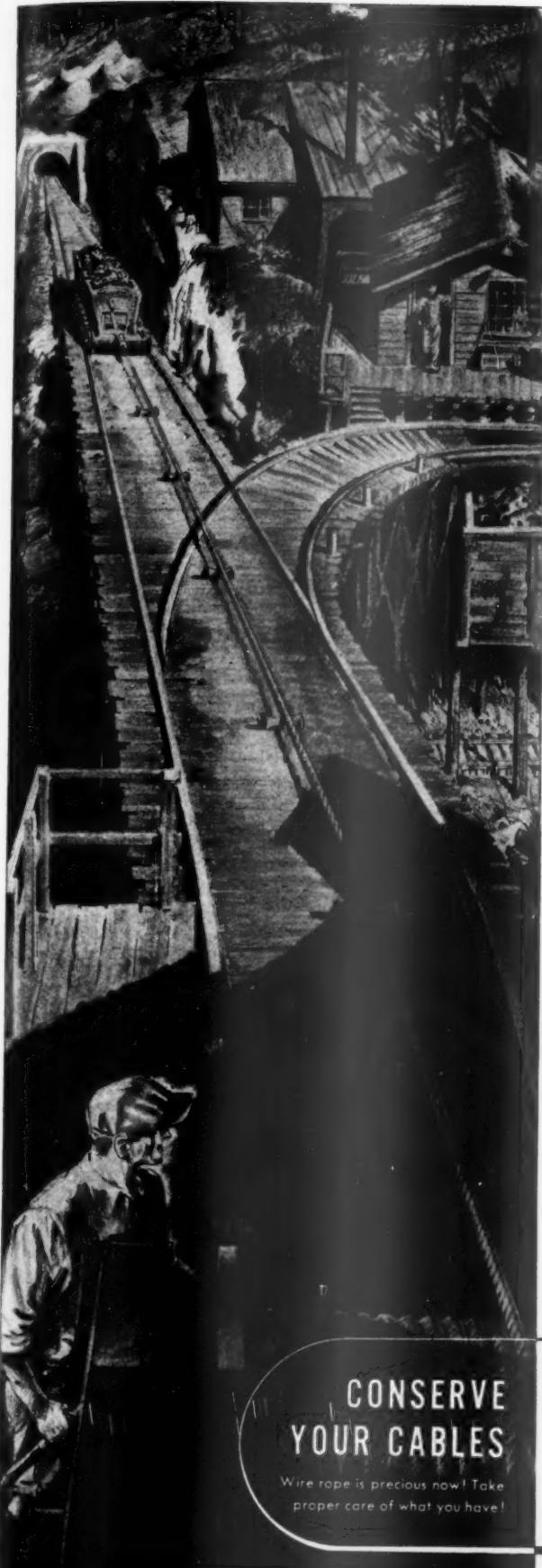
Reuther Plan II

Auto union leader comes back with new ideas of labor Utopia; but industry steers away from them.

Described as "even more dangerous" than its predecessor, a new Reuther Plan was sizzling in the auto industry's lap this week. It had been tossed there by 35-year-old Vice President Walter Reuther of C.I.O.'s United Automobile Workers Union, who rocked the industry in 1941 with a widely publicized and bitterly controversial plan to manufacture 500 fighting planes a day in Detroit factories (BW—Jan. 17 '42, p60).

- **Inefficiencies Charged**—Reuther's latest scheme calls for no production revolution. Instead, it is proclaimed as a program to obtain major increases in war output by "maximum utilization of labor through full and complete employment, and through the building of high labor morale."

Giving names and figures, the union leader argues that auto plants are hoarding labor, using what they have at less



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Wire rope is precious now! Take
proper care of what you have!



For the Dirty Jobs ... and the Delicate-

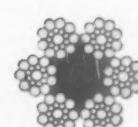
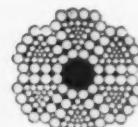
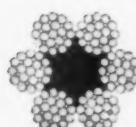
The operator throws in his clutch, and the almost empty power winch begins to wind layer upon layer of steel cable as the laden cars are drawn up through the mine mouth . . . Emptied, the clattering cars start the run down the long slope, dragging cable from the winch drum . . . Trip after trip, ton after ton, day after day, the hauling goes on because the nation needs coal as never before!

Coal mining is hard on men and machines . . . and only steel cable fabricated to exact specifications for this specific service can stand the demand for varied performance, speed, safety and continuous operation . . . always under tension, wound and unwound, exposed to dust, dirt, damp, wet and cold, changing temperature, constant abrasion and strain . . . subject to the widest variety of abuse of any equipment . . . keeping in service with a minimum of care and replacement . . . And in coal mines, as well as in steel mills, oil fields, ship yards and aircraft plants, wherever the service requirements are severest . . . you'll find wire rope by Rochester, working for war and peace.

Now restricted to government services and high priority industries, Rochester Rope is not available for ordinary requirements today. But tomorrow, for the best in wire rope, remember the name!

ROCHESTER *Ropes*

JAMAICA, NEW YORK • CULPEPER, VIRGINIA



Cable conservation will be treated technically
in another advertisement, soon.



OLD GUARD RECRUITS

Soldiers of 38 and over who are eligible for Army discharge prepare to doff khaki for work clothes and enlist

in the industrial army to help swell the manpower pool. Anxious to aid in the making of bombers and flying boats are uniformed applicants at San Diego's Consolidated Aircraft plant.

than peak efficiency, maintaining thousands at less than 40-hour a week employment while hundreds of new hands are hired daily to relieve an alleged labor shortage.

• **The Plan's Backbone**—To rectify this situation and to raise labor morale from its generally acknowledged ebb in Detroit, Reuther proposes four steps:

(1) Establishment of regulations requiring all plants to provide full employment of 40 hours per week which shall be increased to 48 hours per week over a period of 60 days.

(2) Immediate release to other war plants, with full seniority protection, of all employees who cannot be employed full-time.

(3) Government initiation of a national policy that would guarantee 40 hours' pay every week to employees who work less than 40 hours through no fault of their own, costs to be borne by government when layoffs are due to material shortage, change of schedules or specifications, by management where it is responsible.

(4) National War Labor Board institution of an industry wage stabilization policy and creation of tripartite wage commissions in automotive and allied war industries to work out and administer a master wage agreement based on equal pay for equal work.

• **Industry Remains Cold**—Parts of the new Reuther Plan bear notable resemblance to the "employment quota"

scheme which the New Deal is reportedly considering as a postwar employment program (BW-Jan. 16 '43, p15). But whether or not it is designed as a trial balloon, the reaction of the industry will not be tempered. If Reuther's four points get as much publicity as his original plan, expect widespread and determined opposition from the industry.

Detroit management is convinced the union-sponsored program is a new and dangerous dodge, calculated to raise wages, encroach on company prerogatives, and saddle manufacturers with industry-wide collective bargaining.

• **The Opposing Viewpoint**—The "equal pay for equal work" plank is interpreted as a strategem to raise all the industry's wages to the level of the highest paying firm. The idea of a guaranteed weekly minimum wage is condemned as an onerous public subsidy ladled out of the pork barrel, and the notion of giving management only one-third of the right to decide whether it is responsible for less than required employment is criticized as a particularly odious maneuver, intended to make companies bear costs of the guaranteed employment program.

The employer's fight against economic aspects of the plan undoubtedly will be based on the point that, since Jan. 1, 1941, auto workers have had more than the standard 15% increase that wage stabilization regulations allow as an offset to increased living costs. The Automobile Manufacturers Assn.

has prepared a tabulation to show how wages have risen in U.A.W.'s jurisdiction. It shows:

	Employ- ment	Weekly Wage	Hours Worked	Average Hourly Earnings
Jan. 1941	480,000	\$37.96	39	\$0.97
Jan. 1942	437,000	53.18	43.8	1.21
Nov. 1942	590,000	55.26	46.1	1.29

• **Parts Makers' Figures**—Auto parts manufacturers in the Detroit area pay rates practically equal to those of the large concerns. For 48 of these producers, figures are:

	Weekly Earnings	Hours Worked	Average Hourly Rate
Jan. 1941	\$38.99	40.8	\$0.95
Jan. 1942	50.65	44.8	1.12
Oct. 1942	53.56	45.3	1.18

Dividing the Load

Dozen Little NWLB's to be set up in production hubs to accelerate adjudication of war labor disputes.

Faced with a backlog of more than 6,000 cases and a rising tide of complaints from both employers and labor unions, the National War Labor Board is proceeding with a decentralization plan under which Little NWLB's will function in Boston, New York, Philadelphia, Atlanta, Cleveland, Chicago, Kansas City, Dallas, Denver, San Francisco, Detroit, and Seattle.

• **Employers Approve**—Earlier employer reluctance to a decentralization program has vanished, for the new system was approved by unanimous vote.

Each regional board will be composed of twelve members—four representing the public, including the present regional director as chairman; four representing employers; and four representing labor—and will exercise all the powers vested in the top board in Washington, subject, of course, to the national board's right to review a case or assume original jurisdiction if it so desires.

• **Director to Handle Wages**—The Little NWLB's will handle dispute cases. There will be a separate regional wage stabilization director to deal with voluntary wage adjustments. His rulings may be appealed to the regional board.

NWLB will be transformed into a "supreme court" for collective bargaining and will restrict its activities, in general, to the following:

(1) To exercise ultimate reviewing authority and a general superintendence over the regional machinery.

(2) To hear appeals from regional orders in cases where petitions for review are granted.

(3) To issue general policy directives.

(4) To take jurisdiction in cases of general importance whenever it may



Strange things happen to men and machines in the world above our world . . . the bitter cold, almost pressureless and airless world of the stratosphere.

There every man's life is carried in his own oxygen cylinder.

The valves and cylinder that provide oxygen for a stratosphere pilot are as important to him as his own arteries and heart . . . and they must be just as reliable.

Special lightweight cylinders and valves for high-altitude flying were developed by Walter Kidde & Company, specialists in compressible gases.

These same Kidde specialists also developed the carbon dioxide inflation equipment for the rubber rafts that saved the lives of Capt. Eddie

Rickenbacker . . . and many other American fighters.

On planes . . . tanks . . . PT boats . . . ships . . . and in factories, Kidde fire-fighting equipment guards against flames.

Great advances are being made in the field of useful compressible gases. Pioneer in this field, Walter Kidde & Company has developed scores of interesting applications for our armed forces and for industry. After the war, these developments will help make a safer, happier Peace.

For information write
Walter Kidde & Company,
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Bloomfield, N. J.



seem in the public interest to do so.

(5) To support the regional boards in maintaining the national no-strike agreement and in obtaining compliance with their directive orders.

• **May Deny Hearings**—Regional boards are directed by the board to work in the closest cooperation with U. S. Conciliation Service commissioners and are directed to refuse hearings on cases that they think should be returned to the conciliators or to the parties themselves.

The national board has given the regional boards "authority to issue directive orders in dispute cases and rulings in voluntary wage and salary adjustment cases, as agent of NWLB and within the framework of its policies." These orders and rulings will be final, with two exceptions.

• **May Take Jurisdiction**—First, the national board may, by an order of review, on its own motion assume jurisdiction over any dispute case at any stage.

And second, any party may, within ten days after the issuance of a regional board directive order, petition the national board for a review, but the petitioner must satisfy the board that one of the following circumstances exists:

(1) A novel question of sufficient importance to warrant national action is involved. (2) The procedure adopted has been unfair to the petitioner and has resulted in "substantial hardship." (3) The decision has exceeded the board's jurisdiction or is manifestly in conflict with established board policy.

• **Decision Stayed**—When such a petition is filed, the regional decision does not become effective until the national board decides if it will review the case.

FINANCE

A Special Year

New York Stock Exchange reviews twelve months of new type of offerings and finds the results happy in the main.

It was just a year ago next week that the New York Stock Exchange decided to make a cautious experiment with special offerings, a new system for moving large blocks of inactive stocks. Since then specials have become an established part of stock market procedure. They still account for only a small percentage of total turnover, but they are growing fast both in size and number.

• **Largest So Far**—Moreover, in dollar value specials now cut a very respectable figure in the market. Last week Shields & Co. set a record by disposing of \$2,439,132 worth of Texas Co. common. An amount like that would count as big money even in the old bull market days.

Purpose of the special is to handle big blocks that the regular auction market can't absorb (BW—Apr. 11 '42, p80). The deal takes place on the stock exchange floor, but instead of throwing his stock on the market for whatever it will bring, the seller fixes a price. He then offers an extra commission, which may run as high as 2% of the price, to brokers who find customers for him.

Brokers thus receive an additional commission, usually several times what they would make on a regular transaction.

• **The Year's Record**—Altogether the Big Board has handled 80 special offerings since the first test of the system in February. Sales to date total about 940,000 shares with a value of \$26,000,000. Only twelve offerings have flopped, and several of these moved all but a few of the shares involved. About 25 came out with heavy oversubscriptions.

As brokers got the feel of the system, they not only increased the size of offerings but cut down the time. First block to sell special was a 2,958-share chunk of Bon Ami B, priced at 37½, which meant a total value of \$110,555. It took an hour and 42 minutes to move. In August, a 28,700-share block of General Electric was oversubscribed in four minutes. A month later 22,000 shares of Sears Roebuck, total value \$1,193,500, went in 15 minutes, and in mid-November \$1,500,000 worth of Kennecott Copper common turned over in 24 minutes.

• **Matters of Policy**—Most of the kinks that showed up at first ironed themselves out in later offerings. When oversubscriptions appeared, the exchange had to establish the policy of keeping every offering open long enough to get all the purchase orders in. This put allotments on a percentage basis instead of first-come-first-served.

One big trouble spot still hasn't smoothed out. That is the question of whether or not the exchange should force its members to sell special when they would prefer to stage a secondary offering (an off-the-floor sale after trading hours in which both member and nonmember houses participate). For example, in the recent special offering of 60,000 shares of Canadian Pacific, White, Weld & Co. first asked permission to make a secondary. Exchange officials turned them down and said it would have to be a special.

• **Not All Orchids**—So far, this problem has precipitated only one open fight, but the repercussions of that one haven't ended. Dillon, Read & Co., one of the big nonmember houses, asked the exchange to approve a secondary distribution of a big block of Standard Oil of Indiana (BW—Aug. 29 '42, p64). Without official okay exchange members cannot participate in secondaries. Hence D. R. wanted to clear with officials of the Big Board and get the help of member firms in its distribution.

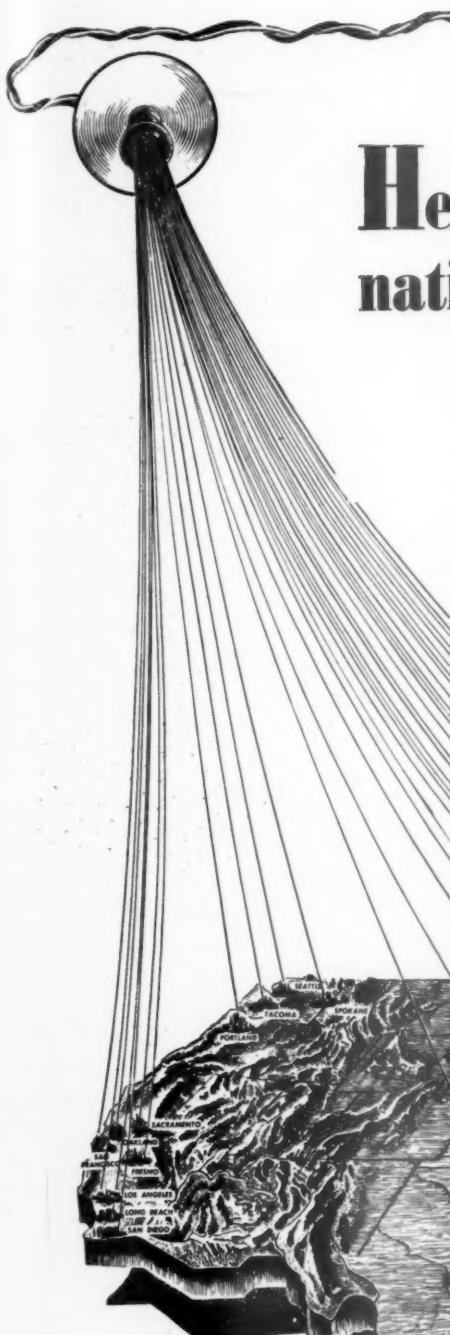
The exchange refused approval, giving D. R. the choice of making a special offering or getting along without the help of member firms. Dillon, Read



SWIFT SWEETIES

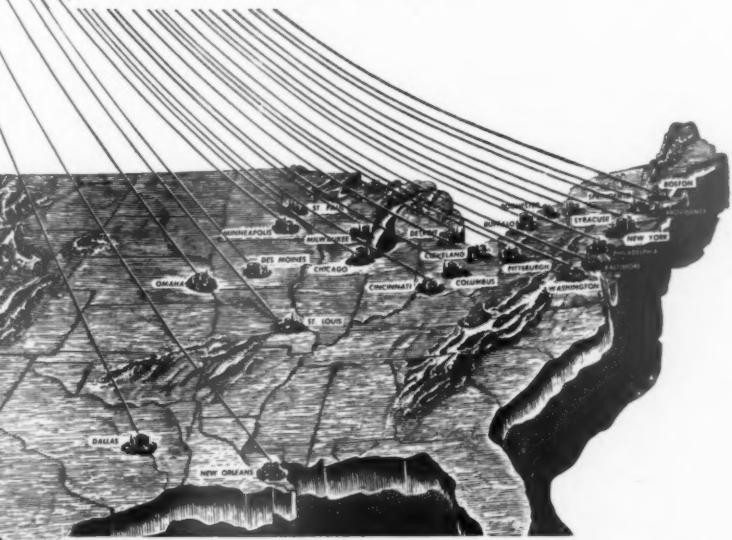
Among Chicago's busiest girls are "Jane Hathaway" and "Jeanne Martin" who write constantly to 9,800 Swift & Co. employees in armed

services. A good-cheer staff maintained by the packing house, Jane (who writes to Americans) and Jeanne (to Canadians) must remain unknown to the boys. A company rule: no dates between correspondents.



Here's the first national newspaper network!

... in comics sections advertising in 40 great Sunday newspapers with more than 14,000,000 circulation... Truly national, reaching more than half the worthwhile families in the U.S.... with coverage concentrated with population and buying power—and unmatched by any magazine list or top-rated program on any radio network... High readership, better than 75% among adults... Long established, regular, whole-family readership... Read at home on Sunday... Large space unit, four colors, low cost... Investigate at once the most magnificent national advertising opportunity available today!



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New York News • Philadelphia Inquirer • Pittsburgh Press • St. Louis Globe-Democrat • Washington Star • Des Moines Register
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Providence Journal • Rochester Democrat & Chronicle • Springfield Union & Republican • Syracuse Post-Standard
METRO PACIFIC: Fresno Bee • Long Beach Press-Telegram • Los Angeles Times • Oakland Tribune • Oregon Journal
Sacramento Bee • San Diego Union • San Francisco Chronicle • Seattle Times • Spokane Spokesman-Review • Tacoma News Tribune
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Government of the Dominion of Canada BONDS

\$30,000,000 Five Year 2½% Bonds

Dated January 15, 1943 Due January 15, 1948

\$30,000,000 Ten Year 3% Bonds

Dated January 15, 1943 Due January 15, 1953

\$30,000,000 Fifteen Year 3% Bonds

Dated January 15, 1943 Due January 15, 1958

PRICES

Five Year 2½% Bonds 100% and accrued interest

Ten Year 3% Bonds 100½% and accrued interest

Fifteen Year 3% Bonds 98½% and accrued interest

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THE FIRST BOSTON CORPORATION

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WOOD, GUNDY & CO., INC. DOMINION SECURITIES CORPORATION

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Dated January 14, 1943.

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**"Costs
LESS
to manufacture
in the WEST?"**

"Yes, Mr. President! In the West we have our own sources of raw materials, we make our own goods, for our own markets. Distribution costs less, saves days of time over shipping from the East.

"In many lines we're already independent of the East. When peace comes we'll be even more so. We're developing ten years in one during this war period.

"Already more than 150 nationally-known manufacturers realize the economies of decentralizing production by putting a plant in the Metropolitan Oakland Area. It's the logical way to cut manufacturing and distribution costs."

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balked at paying the extra commission and handled the job without help. Members promptly raised a howl over losing the chance to participate.

• **Dealers Unhappy**—Specials have also caused a good deal of grumbling among over-the-counter houses, which used to handle most of the big distributions of inactive issues. In the last few months, specials have topped secondaries in dollar volume, which means that the exchange has lured a lot of business away from the counter market. From the members' standpoint, however, than can hardly be called an objection.

Mesta Tax Ruling

If a government agency holds the title, war plant's machinery is clear of local levies, court decides.

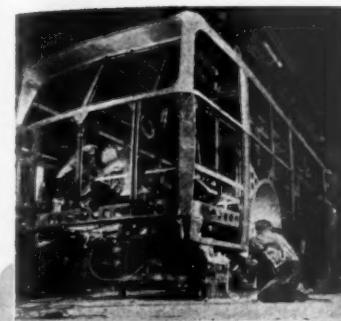
Unless they can persuade Congress to change the present law, local governments will have no power to tax war plant machinery leased by the federal government to private corporations. Such was the precedent set this week when Common Pleas Judge Henry Ellenbogen handed down his ruling in the Mesta Machine Co. case (BW-Dec. 5'42, p5) at Pittsburgh.

• **Far-reaching Effects**—The court's decision puts a crimp in Allegheny county's (Pittsburgh) plan to collect taxes from Mesta on \$618,000 worth of equipment leased from the government for an ordnance plant at West Homestead, Pa. It also establishes a precedent which may put several billion dollars worth of war plant facilities beyond the reach of local governments throughout the country. Unless the case is reversed on appeal, municipalities will have to look to Congress, not to the courts, for the right to go after such enticing revenues.

The case hinged on the question of who actually owns the West Homestead plant machinery. The government holds title, but Mesta is using the equipment exclusively under a lease that provides it must be returned to the government within 90 days of the contract's termination.

• **RFC Act Cited**—Federal attorneys assisted Mesta, argued that the machinery was government property—exempt from local taxation. Allegheny county contended that Mesta was benefiting from municipal services and should pay an appropriate tax.

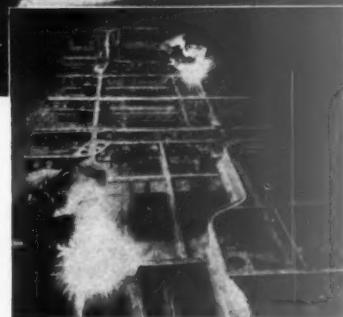
In upholding the government's argument, the court applied the rule set up by the Reconstruction Finance Corp. Act. This permits municipalities to tax real estate owned by a government corporation but exempts all machinery owned by the federal government.



WELDED TRANSPORTS for production troops



Photos courtesy of Mack Trucks, Inc.



are LIGHTER, STRONGER and FASTER

IN many industrial areas, big, welded Mack buses are performing important service to America delivering regiments of war workers to busy production plants. Extra heavy passenger loads are being handled in stride and on schedule.

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Speedier manufacture, less weight and more structural strength, plus lower material costs are benefits provided by welded construction of machines and structures.

Today Air Reduction is concentrating all its efforts on speeding war pro-

duction through the development of new machines and methods that are still further increasing the advantages provided by the oxyacetylene flame and electric arc processes. Many technical advancements, now aiding war industries, will bring even greater benefits to users of welding and cutting in future peacetime manufacturing.

Experienced representatives of Air Reduction's Applied Engineering and Research Departments will gladly aid you on problems concerning the use of welding processes.

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COMMODITIES

Fluorspar Pinch

WPB moves to regulate shipments of mineral vital in steel and aluminum industries; rise in output also sought.

Relatively few industries use fluorspar or the chemicals derived from it, but those that do depend heavily on this mineral. It's vital particularly to three major war industries—steel, aluminum, aviation gasoline—and it contributes to the smelting of various other metals, the manufacture of refrigerants, and to materials used in working glass and ceramics. And, even though the bulk of the supply is produced at home, fluorspar is short.

• **Price Rise No Cure-All**—The Office of Price Administration first attacked the shortage by tilting the ceiling price and then, finally, by suspending it altogether in some instances. Fluorspar now sells around \$25 to \$28 a ton—contrasted with a 1935 price of \$15 and the previous all-time peak of \$25.49 in 1919. But it has become obvious that the production drawbacks go deeper than price; mine labor, to cite one instance, is getting more and more difficult to come by.

Next the War Production Board stepped in, convinced the steel industry that mills would simply have to do without 10% to 15% of their scheduled fluorspar needs in 1943 in order to lop 50,000 tons off estimated requirements. (It was proposed to save another 50,000 tons or thereabouts by sifting it out of other uses.)

• **The Latest Action**—Apparently this expedient wasn't altogether adequate, because WPB now has placed fluorspar under Priorities Regulation No. 1, which forbids anyone to accept a delivery that increases stocks above "a practicable working minimum" and forbids a supplier knowingly to make deliveries to anyone whose inventory exceeds such a working minimum. As a practical matter, WPB will get out restricted shipping lists to be sent to all producers each month to assure "equitable distribution"; there is, however, no formal conservation or M order.

On the statistical side, WPB points out that the United States needs 500,000 tons of fluorspar this year against normal peacetime use averaging around 200,000. Output jumped from 240,000 tons in 1940 to 320,000 in 1941, should top 400,000 this year. From this it can be seen that a deficit up to 100,000 tons could be experienced unless productivity is spurred. Imports are expected to

taking the pulse . . .

of a sewing machine



NOT only is the most advanced scientific technique used in the design and manufacture of Union Special machines, but also in the application and use of these machines. Union Special has pioneered in the development of specialized industrial sewing equipment to do a given job, faster and cheaper. Analyzing, measuring and reducing vibration to an absolute minimum to provide the smoothest possible operating machine is just one of the many phases of Union Special research. Experience gained from thousands of installations on civilian and war work is available to help you handle your sewing jobs whether on tarpaulins or tea bags. Make use of it—call on Union Special now.

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rise, but they will not rise enough to take up the slack in the needed tonnage. • **Why It Is Needed**—The steel industry normally takes 75% of the fluorspar consumed in the United States—to increase recovery of steel from slag, to speed up the process in open hearth furnaces, and in electric furnace alloys. Hydrofluoric acid is basic in manufacturing the artificial cryolite used in aluminum smelting. (The world's major source of cryolite, Greenland, though in United Nations hands, is not being exploited because of the shipping situation.) Fluorspar is a catalyst in making aviation engine fuels and a flux in smelting nickel and lead.

Before 1939, 10% to 30% of American industry's needs came from Germany, France, Spain, and Italy because it was usually cheaper to import acid spar. Close to 90% of all domestic fluorspar production is concentrated in two southern Illinois and three western Kentucky counties; nine western states supply the other 10%. Transportation difficulties—dependence on a single railroad, scanty barge equipment on the Ohio River, and unsurfaced roads—are a major hindrance to supplying the steel mills with all they need.

• **The Biggest Trouble**—But, above all, labor is scarce. It is doubtful that domestic mines could keep abreast of the soaring three-shift demand of their customers as long as they must let one afternoon's blasting settle overnight before the next day's extraction can safely begin. New mines in big production are improbable, not only because it is hard to get materials and equipment, but also because farmers resist yielding up good crop land to mining.

Fluorspar mining firms cannot afford to exploit their own lands unless they know the yield will pay. To help out on this, Washington is cooperating with state surveys in explorations and preliminary drillings for pay dirt, in Illinois, Kentucky, New Mexico, Colorado, Utah, and Idaho.

• **Additional Output**—Hope is that the most promising of these projects will yield more than 40,000 annual tons of new production, most of it this year. Another hope for increased yields is a wider use of the relatively new flotation process of separating fluorspar from the ore, reducing the loss in tailings materials rejected from the old 40%—50% to a mere 10%.

Just how WPB proposes to cut use of fluorspar in steelmaking has not yet been announced. Best guess is by using substitutes. It takes 50 lb. of harder-to-store calcium chloride to accomplish about the same job as 8 lb. of fluorspar, at a comparable cost. Sodium and potassium compounds, generally less efficient and economical than fluorspar, are other possibilities. Some fluorspar may also be reclaimed from slag, but the process is expensive.

THE TRADING POST

Design for Socialization

Some two hundred "economists, political scientists, psychologists, and other educators" have signed a letter to Secretary Morgenthau, Stabilization Director Byrnes, WPB Chairman Nelson, and Price Administrator Henderson, urging that "through administrative order, commercial companies be permitted to include as a deductible cost (for tax purposes) only that minimum of advertising absolutely essential to secure the sale of actual current output."

How that minimum is to be determined the letter does not suggest.

These critics are charitable enough to concede that some of the advertising now being done by business houses may include "messages that the government needs to carry to the public." But these, they contend, should be paid for directly by the government rather than associated with the private trade names of commercial companies." Thus, "the freedom of the press may well be enhanced if newspapers are less dependent upon advertising and more dependent upon collecting the true cost of publication directly from the readers."

The burden of this attack on wartime advertising seems to be based on the assumption that when there is little need to stimulate current consumption, there can be little need for advertising. But that hoary fallacy has given way to a general recognition that advertising is a tool of many uses. It is a vehicle of contact and communication, highly developed by the American people for the exchange of ideas and information. Stimulating current consumption of goods and services is but one of its many tasks.

But the most important function of wartime advertising has little to do with current consumption except as it may help to curb or direct it. Even the great public service that is rendered by business in making its well-worn channels of advertising communication available for public education and inspiration, and in putting its array of advertising talent to work selling war objectives, war needs, and war demands to the American people is not its most important function.

The really vital reason why every business should continue and if practicable increase its advertising during the war is to help preserve the framework of the American economy. That is what we are fighting for—at least, what most of us are fighting for. But the collectivists have other war aims.

Every successful business is based upon several assets. One of these is its

physical plant and facilities. Another is a trained and organized personnel under competent management. A third is its standing and acceptance in the market place, its goodwill or following.

With the advent of all-out war, the nation demands of every business a full surrender of the first two of these assets. Plants and organizations must be converted without stint. In this war American business has met that test.

Each business then must look to its third asset as its chief hope of survival after the war is won. But during the war, many of the normal contacts between a business and its customers are bound to be broken. Its hard-won standing in the market place is threatened by the disruption of its trading channels. So the only available means of preserving contact with its markets is its advertising. That is why many companies are making a greater than normal advertising effort during the war. And if, in thus trying to insure its survival, a company chooses to convey an unselfish and patriotic message to its following, it seems to me that it should be commended rather than sneered at.

* * *

Of course the academic critics may reply that the survival of a business house is a matter of indifference to the nation, that we are interested only in its war productivity and that the desire to preserve a company's identity and trademark is wholly selfish and therefore unworthy. But in that they again are mistaken. For while the productivity of industry is what we need to fight a war, it is the earning power of industry that we shall need to pay for the war. Whether or not we win this war depends in large measure on the production prowess of our industry; whether or not we win the peace depends on how quickly that industry can rehabilitate itself to serve our peacetime needs on a solvent and self-sustaining basis. The speed and effectiveness with which we can re-establish our business on such a basis after the war will depend, in turn, on how effectively we maintain the integrity of American business as an aggregation of organized and going concerns.

I need hardly comment on the suggestion that a government subsidized press would be freer than one supported by the patronage of competitive advertisers. Such a proposal is wholly in harmony with the collectivist tone of the entire letter, which might well be entitled: A project to condition American industry and the American press, during the war, for convenient socialization after the war. It should be considered on its merits as a device to that end. W.C.



*Roll
in the lunch, James*

**...WE'RE BUSY
WINNING A WAR!**

Every minute counts these days in the battle of production . . . and lunch-time bottlenecks can be a serious problem in busy war plants. PIX PORTABLE CANTEEN is one answer to this problem—designed to save steps, save time, save precious floor space. Keeps hot dishes, soups and coffee piping hot. Serves sandwiches, drinks, pastry and candy.

This is just one example of Pick Food Service Equipment that you will find in America's leading factories—planned by the men who'll gladly help you with your problem, be your budget large or small. Send for our new booklet No. CW6 illustrating PIX PORTABLE CANTEENS.

ALBERT PICK CO., INC., 2158 Pershing Road, Chicago
America's Leading Food Service Equipment House



THE TREND

PRICES, SUBSIDIES, AND INFLATION

Whether in peace or in war, a subsidy is a device to maintain or expand production without an increase in price. In peace, under the operation of the market, prices sufficient to cover high costs may put goods and services out of reach of the desired demand. Then occasionally the government steps in with a subsidy. For instance, benefit payments induce farmers to produce a larger and better sustained food supply than the market could pay for; a subsidy enables us to expand shipping to meet a potential military requirement.

• **War creates new reasons for subsidies.** The government today pays higher prices for high-cost copper, lead, and zinc. According to Secretary Wickard's announcement last week, it will pay farmers premiums on potatoes and dried beans produced above quota. To get additional output without offering higher quotations on total production, it subsidizes the increments.

But the chief and most debated use of subsidies in war is to hold down retail prices. A lag between retail and wholesale prices at the time of a "freeze" may result in a squeeze. Or costs may rise, because of higher farm prices or wage rates, or shifts to more expensive materials or modes of transportation. Then, profit margins may disappear or sink so low as to make continued operations impossible. Either a subsidy or a price rise is called for.

Choice between the alternatives—raising prices or instituting subsidies—rests in the first instance on economic grounds. The familiar objection of peacetime, that unfair use of subsidies could work for the benefit of a favored few, meets in wartime the answer that injudicious permission to raise prices—given by the same government that would have the alternative power to institute subsidies—could work to the same effect.

• **Therefore, presumably, standards must be set that will apply to the granting either of a subsidy or of a price rise.** These are that no grant be made unless the industry to be favored is "essential," unless no further economies in operation through simplification and standardization can be effected, and unless profit margins have been called upon to absorb all increases in costs that can be "reasonably" expected.

Loose though these criteria may be, they must serve equally for either line of action. In special instances—as when food packers object that subsidies might permit government a measure of control over trade practices that a price rise would not—a decision between alternatives must be based on additional considerations.

On economic grounds, the choice must be made on the basis of the necessity of halting inflation. A runaway, mad scramble for goods must be prevented.

The effect of a price rise is to touch off the inflation spiral to a greater or lesser degree depending on the extent of the initial rise. For instance, a withdrawal of Agricul-

tural Adjustment Agency subsidies to corn growers would boost not only corn prices, but also those of livestock—if the profitability of feeding corn to hogs and cattle, and so the production of meat, is to be maintained. This would interact on wage rates, on industrial prices, and so, in turn, on farm prices, multiplying the initial rise in corn several-fold. The danger would lie in upsetting the carefully contrived system of wage-price controls.

• **But subsidies, while damping the inflation spiral, aggravate the basic imbalance between consumer demand and the supply of consumption goods.** For when the government pays out subsidies it adds to purchasing power, but not to the value of goods. Unaccompanied by offsets to this additional government expenditure—taxes, forced or voluntary savings—subsidies widen the inflationary "gap." The danger then lies in excess income finally spilling over price and ration dams, upsetting federal controls, and starting anew the scramble for goods and for higher returns with which to purchase them.

So, when costs advance, some one must pay. When prices rise, and the spiral is set to work, the incidence on various economic groups will be different from when taxes or savings are increased in order to meet subsidies. So far as the inequities of the catch-as-catch-can struggle for higher wages, prices, and profits can be reduced by levying the burdens of subsidies through fiscal controls, subsidies are to be preferred. But experience with tax bills indicates that the sound disposition of such burdens is a large order.

Finally to be considered are the effects on postwar prices. For, one good reason for striving to halt inflation now is the certain knowledge that when uneven wartime advances in prices combine with uneven postwar declines a disjointed price structure can result, seriously impairing economic conditions.

To the extent that higher costs are abnormal during war and will be replaced by lower ones with a return to peace, subsidies will make for easier adjustment than would price boosts. Conversely, conversion would be made more difficult were subsidies used extensively to meet large-scale advances in wages which would be expected to continue. For, though it can be argued that any damping of the price spiral through subsidies thereby eases postwar price adjustments, increasing reliance on government funds itself creates postwar difficulties.

• **In short, subsidies to meet unusual increases in costs have strong economic point in the struggle against inequitable, spiraling inflation of the price level.** But it would be dangerous to think that government largesse of this type solves the problem of inflation. That will be with us longer than the war.

The Editors of Business Week

Business Week • January 23, 1943

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